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A SPECIAL REPORT

ON

THE ANNUAL INTERNATIONAL EXHIBITIONS OF THE  
YEARS 1871, 1872, 1873, AND 1874,

BY

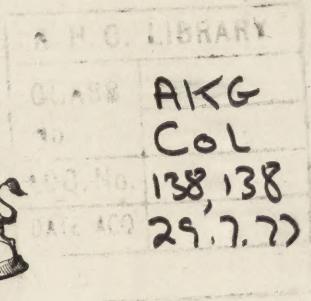
HENRY COLE, C.B.,  
ACTING COMMISSIONER IN 1873 AND 1874,

PRESENTED BY

THE BOARD OF MANAGEMENT

TO

HER MAJESTY'S COMMISSIONERS FOR THE EXHIBITION  
OF 1851.



LONDON:

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1874

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BY  
HENRY COLE, C.B.,  
*Acting Commissioner in 1873 and 1874,*  
PRESENTED BY  
THE BOARD OF MANAGEMENT  
TO  
H. M. COMMISSIONERS FOR THE EXHIBITION OF 1851.

1. THE relations between the International Exhibitions which took place in 1871, 1872, 1873, and 1874, under the responsibility of Her Majesty's Commissioners for the Exhibition of 1851, and the Royal Albert Hall of Arts and Sciences and the Royal Horticultural Society, have been so intimate as to make it desirable to commence this Report by recapitulating briefly the arrangements made between the Commissioners and the Councils of the above-mentioned institutions.

2. In the Commissioners' Fifth Report attention was called to the communications which had passed in the year 1862 between the Commissioners and the Committee appointed by the Queen to advise Her Majesty on the subject of the Memorial to the Prince Consort. The Commissioners pointed out that this Committee recommended that "the Memorial should consist of a Personal Monument in Hyde Park, between Rotten Row and the Kensington Road, and a Central Hall to be placed on our estate in a direct line between the Monument and the centre of the Conservatory of the Royal Horticultural Society," and the opinion of that Committee was quoted, "that a Hall, forming a central point of union where men of Science and Art could meet,

Origin  
of the Royal  
Albert Hall.

“ where the results of their labours, with a view to the special  
“ purposes indicated by the Committee, could be communicated  
“ and discussed, and where deputies from affiliated societies  
“ throughout the United Kingdom could occasionally confer  
“ with the metropolitan authorities, might be fitly recommended  
“ as marking, with the Monument, the general object of the  
“ institutions in their vicinity.”

3. The Commissioners' Report then continues thus:—“ The Committee in support of this recommendation quoted passages from our own Second Report of 1852 to the Crown, and from public speeches delivered on various occasions by his Royal Highness himself. In the reply which Her Majesty directed to be made to the Committee on the 18th July 1862, Her Majesty conveyed her entire and cordial approval of their recommendation that a Central Hall of the character proposed by them, and which might hereafter be made to form part of a general institution for the promotion of scientific and artistic education should be erected in connexion with the Personal Monument to be placed directly opposite to it in Hyde Park.” Her Majesty further expressed her anxious wish that the establishments already placed upon our estate, as well as those that might be expected to come there, should be considered as a whole, and constitute “ one great and comprehensive institution, having for its object to increase the means of industrial education and extend the influence of Science and Art upon productive industry, and forming the most lasting and worthy Memorial of the Prince's untiring and unselfish exertions for the general good.” (See page 21–24, Fifth Report of Her Majesty's Commissioners.)

4. The question of erecting this Central Hall was postponed: but in 1868 His Royal Highness the Prince of Wales, as President of a Provisional Committee for erecting the Hall, brought the subject before Lord Derby, the President of the Commissioners, and a series of resolutions were passed, which are given in the Fifth Report. In the 8th resolution it was stated that the erection of a Central Hall was a prominent feature of the scheme intended to increase the means of industrial education

and extend the influence of Science upon productive industry, and that the erection might serve (in the words of the Commissioners' Second Report) "to provide for men of Science and " Art a centre of action and exchange of the results of their Page 26,  
Fifth Report. labours, and also assist in affording instruction and recreation " for the greatest number of human beings."

5. The Hall was built at a cost of about 210,000*l.*, of Building of  
the hall. which the public subscribed about 110,000*l.*, and the Commissioners gave 80,000*l.* The site, of the value at the time of 60,000*l.*, on which it was built was part of the Commissioners' estate, and the land was leased to the Corporation of the Hall for 999 years at a nominal rental.

6. On the 18th July 1868 a letter was received from the Provisional Committee of the Hall of Arts and Sciences, submitting, for the favourable consideration of the Commissioners, a scheme, dated 30th March 1868, proposing the establishment of Annual International Exhibitions of Arts and Sciences on the Commissioners' estate, in connexion with the Hall and the Horticultural Gardens. This letter transmitted the following extracts:—

(18th July 1868.)

EXTRACT FROM MINUTES OF A MEETING OF THE PROVISIONAL COMMITTEE OF THE ROYAL ALBERT HALL, HELD AT MARLBOROUGH HOUSE ON 15TH JULY 1868.

The Provisional Committee desire to recommend to Her Majesty's Royal Albert Commissioners for the Exhibition of 1851 the favourable consideration of the proposed plan of annual international exhibitions, and to express their hope—1st, that the Commissioners will promote the scheme by subscribing 100,000*l.* as a guarantee, on the condition that 200,000*l.* are previously raised by private guarantee; and—2nd, that the Commissioners will undertake the responsibility of the management.

Royal Albert  
Hall and the  
International  
Exhibition.

ANNUAL INTERNATIONAL EXHIBITIONS OF ARTS AND SCIENCES IN LONDON.

1. International exhibitions of industry, although much diverted from their original intention, as lately happened at Paris, afford such valuable means of comparing each nation's progress in works of art and industry, that they ought not to be abandoned, but should be reorganized with the light of past experience.

2. With the view therefore of deriving the greatest practical advantage from such displays, it is desirable to revert to some such annual exhibitions as were held by the Society of Arts in several years previous to 1851, under the presidency of the Prince Consort. Accordingly, it is proposed to hold an exhibition every year of some one class or some few classes of manufactures which have been prepared expressly to show novelty, invention, or special excellence. From such an exhibition objects obtainable in ordinary commerce and those which have been already exhibited would be excluded. The exhibition would therefore be very select and limited in size. Thus in one year might be exhibited metals, manufactures in metals, and the machinery necessary for their production; in another year some classes of woven fabrics and their machinery; in a third year pottery, &c., and it is considered that in five years the whole circle of the chief products of human industry would be exhibited.

3. But every year there might be exhibited illustrations of very remarkable discoveries in science as well as works of fine art and manufactures in which art was the express feature.

4. It is proposed that all works should be admitted by the award of competent judges, that no prizes should be awarded, but that discriminating reports should be made and published as soon as possible after the opening of the Exhibition to serve as guides during its existence.

5. A sum of money might be annually devoted to make purchases of remarkable works which might be sent to local museums throughout the United Kingdom.

6. One of the objects of the Royal Albert Hall of Arts and Sciences now in course of erection at Kensington Gore is that of holding International Exhibitions.

7. It is therefore proposed to seek the co-operation of the Provisional Committee of the Royal Albert Hall, of Her Majesty's Commissioners for the Exhibition of 1851, of the Royal Horticultural Society, and of the Society of Arts.

8. International musical performances might also form part of these exhibitions, and annual exhibitions of flowers and plants might be held by the Horticultural Society at the same time, and it is believed that the Hall and other buildings, which would complete the gardens of the Horticultural Society, and may easily be erected on part of the grounds of that Society, will afford every facility that can be devised for the permanent establishment of such exhibitions on the scale now proposed.

9. The following persons have agreed to promote the above-mentioned plan:—

THE RT. HON. THE EARL GRANVILLE, K.G., President of the International Exhibition of 1862, and Vice President of the International Exhibition of 1851.

THE RT. HON. H. A. BRUCE, M.P., Vice-Chairman of the Executive Committee of the Royal Albert Hall, one of Her Majesty's Commissioners for the Exhibition of 1851.

GENERAL THE HON. C. GREY, Vice-President of the Royal Horticultural Society.

HENRY COLE, C.B., Vice-President of the Society of Arts and Vice-President of the Royal Horticultural Society.

E. A. BOWRING, C.B., Secretary to Her Majesty's Commissioners for the Exhibition of 1851.

JOHN FOWLER, C.E., late President of the Institution of Civil Engineers.

MICHAEL D. HOLLINS, Chairman of the Potteries Chamber of Commerce.

CHARLES LAWSON, late Lord Provost of Edinburgh.

ROBERT NAPIER, C.E., late President of the Society of Mechanical Engineers.

HENRY THRING, one of Her Majesty's Commissioners for the Exhibition of 1851.

JOSEPH WHITWORTH, late President of the Society of Mechanical Engineers.

30th March 1868.

7. The scheme contemplated five Annual Exhibitions; and suggested that the admission of works should be granted by competent judges; that no prizes should be awarded; that reports should be published during the Exhibition; that purchases of the best works should be made and circulated to local Schools of Art; and that the co-operation of the Royal Albert Hall, the Royal Horticultural Society, and the Society of Arts, &c. should be obtained.

8. It was also brought to the knowledge of the Commissioners that at the Paris Exhibition of 1867, the Commissioners representing the United Kingdom, Austria, Prussia, Russia, Italy, and the United States, had adopted and published resolutions, in which they had expressed their opinions that the present system of International Exhibitions ought to be re-considered. These Commissioners recommended, among other points, that the growing size of Exhibitions should be discouraged; that buildings and fittings and conveniences in all respects should be provided by the country inviting, so as to economize cost to Exhibitors; that the arrangement should be rather by classes

Opinions of  
Foreign  
Commission-  
ers on the  
size of Ex-  
hibitions.

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First Report  
on Paris  
Exhibition,  
1867.

than by nationalities; that no prizes of any kind should be awarded, but that reports should be published. (See Appendix X., p. 76.)

9. The Commissioners were of opinion that the scheme proposed was calculated to confer important benefits upon the manufacturing and commercial interests of the country, at the same time, that it was in entire conformity with the objects for which they had been incorporated, and that they would, consequently, be justified in making a liberal application of the resources at their command towards its execution. An estimate of a total capital outlay of 200,000*l.*, after providing for every contingency, as sufficient for the complete realization of the scheme, was considered, and the Commissioners were of opinion that in the event of that estimate proving sufficient, and of the public generally being found willing to subscribe one moiety (viz., 100,000*l.*) of the sum in question, they might properly advance the other moiety, and, further, that in accordance with the request of the Provisional Committee, they might undertake themselves the entire management and responsibility of the proposed Exhibitions. As a preliminary step, however, and in the absence of sufficient information as to the extent to which the manufacturing and general public would be likely to be favourably disposed towards the scheme, and to contribute towards its execution, it was agreed that it would be desirable that the Chambers of Commerce of the country should be consulted on the subject; the secretary was instructed to prepare a letter for submission to the President (the Earl of Derby), embodying the above views, and calculated to elicit the opinions of the Chambers, and also those of such societies as the Royal Agricultural Society, the Society of Arts, the Institution of Mechanical Engineers, and the Institution of Civil Engineers, &c.

10. On the 17th March 1869 the consideration of the question of the establishment of Annual International Exhibitions was resumed, and it was resolved, after consulting Sir Alexander Spearman, that a loan should be obtained from the Commissioners of Greenwich Hospital on the security of the Com-

missioners' estate, as it was not thought expedient to canvass for public subscriptions or for any guarantee in aid.

11. On the 8th July 1869 a scheme of Annual International Exhibitions to be carried into effect at a cost not exceeding 100,000*l.* was finally adopted. Authority was given to the Finance Committee to take all the steps necessary for raising the money and carrying the scheme into effect. For the purpose of assisting the scheme, General the Hon. C. Grey, Sir Francis Sandford, and Dr. Lyon Playfair, all well acquainted with the two former Exhibitions of 1851 and 1862, were elected as Commissioners.

12. Having thus briefly related the circumstances which led to the adoption of the scheme of Annual International Exhibitions, I now proceed to state generally the nature of the arrangements which were adopted for the transaction of business, and the results of the four years Exhibitions.

*Arrangements for the Transaction of Business.*

13. It should be observed that from the year 1868, when the subject of Annual International Exhibitions was first brought before the Commissioners, to the termination of the series in 1874, many changes took place by deaths and additions in the Commission. These changes, which are important, are now shown for the first time (see Appendix I., p. 1). The Commissioners reserved to themselves the determination of all questions of general policy and principles, but they resolved that the *Finance Committee* should have full authority to take all the steps necessary for raising the money and carrying the scheme into effect. Following the precedent of the successful Exhibition of 1851, an executive Committee was appointed to carry out the executive details of the Exhibitions under the title of the *General Purposes Committee*, and the following noblemen and gentlemen were invited to give their assistance, namely: Earl de Grey and Ripon (Chairman); the Marquis of Lansdowne, Earl of Devon, Earl Granville, Lord Northbrook, General Grey, Sir Stafford Northcote, Mr. Bruce, Mr. Forster, Sir Francis Sandford, Mr. Bowring, Mr. Cole, Mr. Gibson,

Arrangements for  
conducting  
the Exhi-  
bition.

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Dr. Playfair, Mr. Thring. His Royal Highness the Prince Christian and Col. H. F. Ponsonby, were subsequently added as members.

Finance Committee.

14. Before this *General Purposes Committee* had assumed its duties, the *Finance Committee* had entered into contracts for the buildings, and reported to the Commissioners that an agreement had been made with the Royal Horticultural Society, by which the free use of the Gardens of the Society would be enjoyed by visitors to the International Exhibitions. The terms of that agreement, which were of a mutually beneficial character, were arranged by the *Expenses Committee* appointed by the Commissioners and the Horticultural Society. (See Appendix XI., p. 77.). The *Executive Committee of the Royal Albert Hall* and the *General Purposes Committee* of the Annual International Exhibitions both passed resolutions that it was most important to the success of their respective undertakings, that covered intercommunication should be made with the railway and the South Kensington Museum.

General Purposes Committee.

15. The *General Purposes Committee* began their duties on 6th Aug. 1869, and continued to act until 6th Dec. 1872, having held 33 meetings. Their minutes were printed.

16. Whilst the various measures were in progress for organizing the Exhibitions, the Commissioners sustained a heavy loss in the death of General the Honourable Charles Grey, who, as private secretary of His Royal Highness the Prince Consort, was especially acquainted with His Royal Highness's views for promoting Science and Art applied to productive industry. General Grey had taken the greatest interest in promoting the erection of the Royal Albert Hall, and had been elected a member of the Commission expressly to assist in carrying into effect the Annual International Exhibitions.

17. The Earl de Grey and Ripon acted as Chairman of the *General Purposes Committee*, except during his absence in the United States, until March 1872, when His Royal Highness the Duke of Edinburgh took his place. The Commissioners resolved to supersede the *General Purposes Committee*, and to appoint annually in their stead a *Committee*

of *Management* for the purpose especially of "connecting " the interests of the Commission in the Royal Horticultural " Gardens and in the Hall with those of the Exhibition, so " as to subserve the common interests, of the property as a " whole." The Commissioners named on the first Committee of Management were, His Royal Highness the Duke of Edinburgh, Sir Wm. Anderson, Sir Francis Sandford, Mr. Gibson, Dr. Playfair, Mr. Thring, and Mr. Henry Cole—I being elected a Commissioner to enable me to join the Committee (13th August 1872). Upon my retirement from the public service, in 1873, I ceased to be one of the Commissioners and became their paid officer. H.R.H. the Duke of Edinburgh, owing to his unavoidable absence abroad, resigned the chairmanship, and from February 1873 until March 1874, the Earl of Carnarvon acted as Chairman to the Board of Management, when he was succeeded by the Earl Spencer.

18. The staff organized for the four successive Exhibitions Staff. under the control of these Committees for carrying on the actual business of the Commission, in respect of the International Exhibitions, is shown in the Appendix II., p. 3, &c. Some idea may be formed of the extent of the duties from the amount of correspondence which was carried on under the superintendence of Mr. Wright, secretary to the executive, who had experience of the Great Exhibition of 1862 and other Exhibitions (see Appendix LXIV., p. 205). The Appendix (LXIII., p. 196) also contains a catalogue of the printed documents, announcements, and decisions issued in each year, which were modified yearly according to the experience gained, and finally were consolidated into a directory. These are given, Appendices III., IV., V., and VI., p. 26, &c. Numerous Special Committees were organized for the transaction of the general business for the several classes of the fine arts, and the technical details of each year's industrial representation. By means of this valuable assistance completeness was secured for each year's Exhibition, which could not have been obtained otherwise. Appendix II., p. 5, &c.

19. I venture to say that the Commissioners' best thanks

are due to their several Royal Highnesses, and to the various noblemen and gentlemen who acted on these Committees for their services, which will be found detailed in the Reports of the three executive officers, Capt. Grover, R.E., Capt. Clayton, R.E., and Lieutenant H. H. Cole, R.E. (See Appendices XVI. to XLVI.)

20. In these as in former International Exhibitions the Commissioners derived important benefit from the co-operation and assistance of the officers and men of the Royal Engineers, who had been placed at their disposal by the War Office. Their duties consisted in general superintendence and arrangement, responsibility for the security against fire, heating, ventilation, &c. In organizing the details for the first of the Exhibitions in 1871, 53 non-commissioned officers and men were employed, but this number was reduced to 13 in subsequent years.

*Communications with Foreign Countries and Colonies.*

Communications with foreign countries.

21. Letters announcing the series of Annual International Exhibitions were respectively addressed to the Foreign, Colonial, and India Offices, and the then President of the Commissioners, the Earl of Derby, invited the following Princes to act as Presidents of classes. Some presided over Foreign Commissions especially named, whilst to the personal influence of most of these Royal personages much of the completeness of the classes of the Exhibition must be ascribed.

Albert Edward, Prince of Wales.

Alfred, Duke of Edinburgh.

Frederick William, Crown Prince of Prussia.

Louis, Prince of Hesse.

Albert, Prince Royal of Saxony.

Prince Napoleon (Jerome).

Philippe, Comte de Flandres.

The Cesarevitch.

Nicolas, Duke de Leuchtenberg.

Oscar, Prince of Sweden and Norway.

Humbert, Prince Royal of Italy.

Amadeus, Duke of Aosta.

Charles Louis, Archduke of Austria.

Rainer, Archduke of Austria.

Frederick, Crown Prince of Denmark.

22. The following countries appointed Commissioners, who were present at one or more of the Exhibitions according to the necessities in each Exhibition:—

Argentine Confederation.	Netherlands.
Austro-Hungary.	Norway.
Austria.	Peru.
Hungary.	Portugal.
Baden.	Rome.
Bavaria.	Russia.
Belgium.	San Salvador.
Chili.	Spain.
Columbia.	Sweden.
Denmark.	Switzerland.
France.	United States.
Hesse.	Venezuela.
Japan.	Wurtemburg.
Italy.	

23. In some cases such as Morocco, Tunis, Turkey, and Persia, special arrangements were made to procure objects when required to complete the classes of the respective years.

24. Only the following colonies sent representatives to the Colonies. different series:—

New South Wales.	South Australia.
Queensland.	Victoria.

25. India was well represented at each of the series. India.

26. The Commissioners entered into correspondence with, Societies. and from time to time obtained valuable assistance from, societies for promoting Science and Art, especially from members of the—

Society of Arts.
Royal Academy and other Art Societies.
Institute of Civil Engineers.
Institute of Mechanical Engineers.
Institute of British Architects, &c.

*The Buildings and Fittings.*

Buildings  
and fittings.

27. It should be pointed out that when the first proposal for this series of International Exhibitions was discussed, a building for them was designed as a glass structure, to be placed on the ante garden of the Royal Horticultural Society, which at the termination of the Exhibitions might be used, if desired, as an enlarged conservatory, so that the present conservatory might be removed in order to give improved access to the Royal Albert Hall from the gardens. But as this building would have entailed a cost of at least 200,000*l.* without fittings, the design was abandoned, and a plan prepared for building galleries on the east and west sides of the gardens close to the arcades. This plan was in accordance with the first laying out of the gardens in 1856. The buildings helped to complete the original design, and were intended to serve for public galleries to be generally useful, having reference as well to International as to any other special Exhibitions. Events have proved that the capital invested on these buildings has not only during the Exhibitions promoted Science and Art applied to productive industry, but is likely to prove financially remunerative by the buildings being leased to Government.

28. It must be always borne in mind that the intention was to have combined the Albert Hall, the International Exhibitions, and the Horticultural Gardens as a whole, and it was always contemplated that the access to every part should be free and uninterrupted, and especially that visitors should be able to cross the gardens freely from one gallery to another. Under this theory there was no objection to placing the Exhibition galleries in line round the gardens rather than forming one block according to the plan first contemplated.

29. The galleries which have been specially erected are 30 feet in width, the ground floor is 20 feet high, but the top lighted galleries, excepting the towers, are 30 feet high, with 15 feet width of skylight, following the formula for a picture gallery first proposed by Mr. R. Redgrave, and successfully worked out by the late Captain Fowke, R.E., at the South Kensington Museum and in the Exhibition of 1862. These

galleries also provided access to pleasant promenading space on the terrace roofs, above the east and west arcades of the gardens. The galleries are built of red brick with terra cotta dressings. Tenders for their erection were sought from responsible contractors, and the works were executed by Messrs. Lucas Brothers. The tender accepted for these galleries, independently of various temporary structures and supplementary junctions, was 68,335*l.* The architect for the works was Lt.-Colonel, now General, Scott, assisted by Mr. James Wild. Further information is given in the Appendix (XIII., p. 84, and XLV., p. 169).

30. No special provision in the buildings was made for any large place where visitors might assemble and promenade as in former International Exhibitions. It had been contemplated that the conservatory of the Horticultural Society might have afforded such a space, but this was not found to be feasible, and there is no doubt that the want of it damaged the attractiveness of the Exhibitions to the general public.

31. A considerable outlay, exceeding 38,000*l.*, was incurred in various works tending to the completion of the quadrants and arcades in the garden, in uniting the upper arcades with the Royal Albert Hall, also for the refreshment rooms, which were placed in buildings belonging to the Commissioners at the south end of the gardens. (See Appendix LXVI., p. 211.)

#### *Supplementary Buildings.*

32. The demands for increased space beyond what it was in the power of the Commissioners to afford, were so urgently preferred by France, Belgium, India, and Queensland, that the Commissioners consented to the erection of supplementary buildings, which were carried out at the cost of the respective countries. The French and Belgian buildings were ultimately acquired by the Commissioners at a cost of 7,000*l.*

33. During the Exhibitions, the maintenance of buildings, alterations, and temporary works were in the charge of the officers of the Royal Engineers, who acted as the executive. Until July 1873, this duty was performed by Capt. Grover, when it devolved on Lieut. H. H. Cole. (See Appendix XLV., p. 169.)

*Fittings, &c.*

34. In view of saving exhibitors expense, and unlike the practice at previous International Exhibitions, the Commissioners incurred the cost of fittings, glass cases, and shafting for machinery, the cost of which exceeded 13,000*l.* The superintendence over this department devolved upon Capt. Clayton, R.E.

*Approaches.*

**Approaches.** 35. Two measures of great importance to the success of the Exhibitions were under frequent discussion when the scheme was being matured, but various difficulties prevented their accomplishment. A scheme was recommended by the *General Purposes Committee* for the construction of a covered communication between the South Kensington Station of the Metropolitan District Railway and the new Exhibition building, by means of an underground tunnel from the station to the south-east corner of the site of the Exhibition of 1862, and of a covered way from that site to terminate at the Exhibition building: and it was ascertained that Her Majesty's Government provisionally consented to the construction of the covered way over the site of the Exhibition of 1862. The committee expressed their opinion that the work, if carried out, would greatly promote the interests of the annual Exhibitions and of the Royal Albert Hall. A plan for the construction of approaches from the Exhibition and Prince Albert's Roads to the Royal Albert Hall, consisting of carriage drives running east and west from the main entrance of the hall to points adjoining the north-east and north-west entrances of the Royal Horticultural Gardens respectively, was also submitted to the Commissioners as being essential to the successful working of the carriage arrangements for the Albert Hall, and that they would otherwise be of advantage to the Commissioners' estate. Furthermore, it was also hoped that by means of a tunnel under Exhibition Road the Exhibition and the South Kensington Museum should have been connected together, so that the visitor would have been enabled to pass from the

Connexion  
with the  
South  
Kensington  
Museum.

study of ancient objects to modern ones. Negotiations were opened with the Department of Science and Art and the Treasury, but the tunnel had to be abandoned. And none of these necessary works were executed.

*Division of Space.*

36. Throughout the series of the Exhibitions the top-lighted galleries were used for the display of pictures and all descriptions of Fine Arts. The ground floor on the west was appropriated to machinery in motion, whilst the south and east galleries were devoted to manufactures. The first principle in the division of space was to bring all the objects of each class together for easy and instructive comparison, and secondly, to divide the classes according to nationality. It had been the strong wish of the Prince Consort that these principles should have been carried out for the Exhibition of 1851, but want of experience prevented the attempt, and in that Exhibition the space was allotted geographically except in the case of machinery in motion, which required special preparations, such as steam, which could only be provided in one spot. In the International Exhibition of 1862, further attempts were made to improve the classification by increasing the number of classes which should be kept separately. In the Paris Exhibition of 1867 an attempt was made to classify, firstly, by classes, and, secondly, by nationalities, on a great scale. Thus the huge building of 1867 was divided into zones, each zone nominally appropriated to objects of the like nature, whilst slices of them were assigned to different countries. The Foreign Commissioners who assembled in Paris in 1867 discouraged the idea of the increasing vastness of Exhibitions and geographical arrangement of objects (see Appendix X., p. 76). In the series of Exhibitions just ended, necessity compelled the recognition of both principles of arrangement, and experience has shown that if an Exhibition be limited in extent and under a single responsibility for arrangement as at the Royal Academy, it is quite possible to arrange the collection of objects on the

Division of space.  
See tables and maps in Appendix LV., p. 183.

philosophical principle of classing like objects together. Whilst there is no doubt that this course is preferable for utility and technical instruction, it is also certain that it is not so picturesque or popular as an arrangement by countries.

*Openings of the Exhibitions.*

37. The Exhibitions extended over four years. Before relating the results of them it may be stated that they all were opened punctually on the days appointed. H.R.H. the Prince of Wales, the President, and H.R.H. the Princess Helena, on behalf of Her Majesty the Queen, opened the first, on the 1st of May 1871, with a State Ceremony (Appendix VII., p. 57). H.R.H. the Duke of Edinburgh held an official reception on the 27th of April 1872, as the introduction to the second; whilst the third and fourth opened on the Easter Mondays of the years 1873 and 1874, when thousands of people attended.

*Royal Visits.*

38. The Queen was graciously pleased to visit the Exhibitions in 1871, 1872, and 1873; so did the King of the Belgians and the Shah of Persia.

*Fine Arts.*

*Fine Arts.*

39. The specimens of painting, sculpture, and other works of Fine Art offered each year for exhibition were greatly in excess of the space provided by the galleries expressly prepared for display of Fine Arts. In 1871 and 1873, and indeed more or less in every year except 1874, the picture galleries in the Royal Albert Hall accommodated the excess. In 1872, sculpture was exhibited and made a feature in the North Quadrants. In 1874 the Arcades of the East Galleries were used for the Fine Arts generally. But this inevitable dispersion of the Fine Arts was not acceptable to the exhibitors even if it were to the general public. The detailed reports by the executive officer (Lieut. H. Cole, R.E.) superintending the Fine Arts are given in the

**Appendix (XVI., p. 88).** The exhibitions of foreign Fine Arts have tended largely to diffuse a desire to possess works of art, and increase the pleasure and recreation which pictures give. The modes of manipulation practised by foreign artists differ from the work of our own artists, and the knowledge of them cannot be otherwise than useful to the progress of Fine Art. It appears likely that the Exhibitions will not only have acted as a stimulus to British art, but will have increased largely the importation of foreign art. The experience of 1873 and 1874 showed that foreign countries had a growing desire to send works of Fine Arts, especially paintings and sculptures, and the sales were large. In the Belgian division the sales exceeded 50,000*l.* Fine Art applied to productive industry, especially to objects in daily use, made obvious progress during these Exhibitions, and was becoming a marked feature in them. These Exhibitions supplied a manifest want, as no institution at present exists for showing the application of pictorial and formative art in works of utility, according to the practise of the best periods of art in all ages and countries.

40. In 1873 and 1874 special collections were made of the works of deceased British artists. In 1873 the works of J. Phillip, R.A., and T. Creswick, R.A., were exhibited and made a considerable impression. Her Majesty the Queen was graciously pleased to send many early works by Phillip, painted long before his merits had been acknowledged by the public, and H.R.H. the President held a meeting at Marlborough House to promote this Exhibition. In 1874 the works of Wilkie, R.A., Constable, R.A., Egg, A.R.A., and Roberts, R.A., were brought together, as well as specimens of water colour painting by Prout, Cotman, C. Wild, Pugin, Coney, and MacKenzie.

41. The Commissioners are under great obligations to the proprietors of works for their liberality in lending works to all the Exhibitions, and to the several distinguished persons who assisted in the selection, the hanging, and the reporting on the works of art (see Appendix II., pp. 14, 21, also pp. 5, 15).

*Music.*

Musical arrangements.

42. Throughout the whole series of the Exhibitions, the fine art of music received systematic attention, and for the preliminary organization the Commissioners are greatly indebted to the Musical Committee, which consisted of the Earl of Wilton, Lord Gerald Fitzgerald, Sir John Pakington (now Lord Hampton), the Hon. S. Egerton, Mr. F. Clay, Mr. W. H. Gladstone, and Mr. Stephenson. For the year 1871 it was resolved that each foreign country should be invited to send its most celebrated organist to perform on the great organ in the Albert Hall, and that an honorarium of 50*l.* should be allowed to each. The principal colonies were also invited to send an organist, and the principal British organists received invitations. Foreign as well as English military bands were engaged to play either in the Horticultural Gardens or Albert Hall.

State opening.

43. A special performance for the State Opening in 1871 took place in the Royal Albert Hall, which was conducted by Sir Michael Costa (see Appendix VII., p. 57), who kindly offered his gratuitous services. French music was represented by M. Gounod, who produced a new cantata entitled "Gallia;" Germany, by Dr. Ferdinand Hiller, who produced a march; Italy, by Signor Pinsuti, who composed a song to words written expressly by the Lord Houghton; whilst Mr. Arthur Sullivan composed a cantata as representing English music.

Musical instruments.

44. In 1872 musical instruments constituted one of the classes of the Exhibition, and arrangements were made for trying the instruments in the Hall under the direction of Lord Gerald Fitzgerald, Mr. Pauer, and Mr. Seymour Egerton (Appendix XXIV., p. 121). The following series of concerts were given in the Royal Albert Hall; the subscribers to them were privileged to obtain season tickets at the reduced price of one guinea each. Oratorios given by the Sacred Harmonic Society under the direction of Sir Michael Costa; Operatic and Miscellaneous Concerts given by Mr. Mapleson; Popular Concerts under the management of Mr. Arthur Chappell, and

Choral Concerts under the direction of Mr. Charles Gounod. The compositions sent in were examined by Mr. Pauer, Mr. Sullivan, Mr. E. Silas, Mr. Seymour Egerton, and Mr. F. Clay.

45. In 1873 an orchestra of 50 performers, conducted by Mr. Barnby, gave daily concerts of a high standard in the Royal Albert Hall, and it is to be regretted that they were not numerously attended, although of an intellectual and highly interesting character. Dr. Stainer and Mr. Best gave frequent recitals on the organ. Visitors to the Exhibition had free admission to the picture gallery of the Hall.

46. In the year 1874 daily organ performances were given in the Hall, and towards the conclusion of the Exhibition a military band played twice a week in the garden of the French Annexe. The Commissioners were prepared to encourage the performance of daily classical concerts if the seatholders would join in a guarantee for the expenses, but these did not take place. The expenditure in promoting musical art during the four years amounted to upwards of 8,000*l.*

#### *Exhibitions of Manufactures.*

47. For the special features of the Exhibitions of each year, I refer to the detailed reports of the executive officers superintending the classes of manufactures exhibited in each year, which are given in the Appendix (XVII., et seq.).

48. In the respective Exhibitions, Capt. Clayton, R.E., had charge of pottery, educational apparatus, cotton, musical instruments, paper, silk, carriages, civil engineering, heating, and leather. Captain Grover, R.E., had charge of woollen and worsted manufactures, steel and surgical instruments. Lieut. H. H. Cole, R.E., superintended the classes of jewellery, food, cooking, lace, bookbinding, and wines.

49. Visits were made to the principal seats of manufactures to organise suitable representations of each class of manufactures. For the classes all special committees were formed of gentlemen particularly qualified to assist. The Society of Arts assisted the educational division in 1871; and in 1873

offered prizes for improved cabs, and a jury, presided over by the Duke of Beaufort, K.G., awarded the prizes with great care. The College of Surgeons superintended the surgical instruments. To complete the collection of surgical instruments, ancient specimens were obtained from abroad, and even facsimiles of ancient Roman instruments were procured from Naples.

50. In most of the classes the representation, although limited, was far more systematic and complete than in any of the former large International Exhibitions, and therefore much more instructive. The collections especially made from foreign countries, such as jewellery, have tended to complete our National Museums. But limited as was the scope of these industrial exhibitions, it was generally felt that it might have been better to have represented only *one* class of manufactures in each year. It would probably have been equally attractive to the students in technical instruction, and would have entailed less cost on the Commissioners and less strain upon the executive.

#### *Machinery.*

**Machinery.** 51. In each year specimens of the machinery necessary for the manufactures exhibited were collected. They were not numerous, but of the newest and highest quality. Nothing equalling the printing machinery of the *Times*, or the lace machinery of Nottingham, had been seen in former Exhibitions.

52. New machinery other than that illustrating the manufactures of the year, was admitted under new inventions, and the most remarkable specimens are mentioned in the superintendents' reports. Until his health gave way, the machinery was superintended by Captain Grover, R.E., and upon his leaving the charge devolved on Captain Clayton, R.E.

#### *New Scientific Inventions and Discoveries.*

New scientific inventions and discoveries.

53. Specimens of these in each year were collected by means of committees consisting of the most eminent men in various branches of science. (See Appendix XXI., p. 111 *et passim.*)

*School of Cookery.*

54. In the year 1873 one of the industrial divisions was the School of exhibition of food, and it was thought expedient to couple with it, the delivery of lectures, which were given by Mr. Buckmaster, under the superintendence of a committee, of which the Hon. F. Leveson-Gower acted as chairman. (See App. XXXIII., p. 148.) The Queen was pleased to inspect the school; the public manifested great interest in the subject and thronged to the lectures. The receipts exceeding 1,800*l.*, more than covering the expenses, which were heavy.

55. So great was the success of this experiment that the same committee have organised a National Training School of Cookery, which has been accommodated with premises free of rent, granted by the Commissioners for two years. The first object of the school is to train teachers to give instruction in training and other schools in the art of cooking suitable for families which can afford to spend from 7*s.* a week to 100*s.* a week in buying food to be cooked. There are three separate kitchens: one for learners, one for practice for middle-class cookery, and one for artizan cookery. Lectures and demonstrations are also given and examinations held. Since the starting of the school in May 1874 upwards of 766 pupils have passed through it and 198 have taken certificates; donations applied towards preparation of the buildings and erecting a permanent structure, annual subscriptions, and incidents have amounted to about 1,070*l.*, whilst as much as 1,603*l.* has been received in fees. There is good promise that the school will become a permanent institution, owing its origin to the action of the Commissioners, like other important institutions on the Commissioners' estate. This school will have a useful influence in promoting the knowledge of food and its preparations as part of public elementary education. Special grants are now made by the Committee of Council of Education for "food and its preparation." The school will thus assist the public objects of that Committee.

*Special Exhibitions at Berlin and Nottingham.*

56. It had been suggested by the Foreign Commissioners in Exhibitions Paris in 1867, that Exhibitions might be sent from one capital at Berlin and Nottingham.

to another in rotation. Accordingly in 1871, a desire having been expressed by the Crown Princess of Prussia that the collections of pottery should be sent to Berlin (see Appendix XV., p. 87), the Commissioners favoured the idea, and assisted in its accomplishment. It is believed that the Exhibition proved satisfactory to the exhibitors as well as to the visitors to the Exhibition in Berlin.

57. Again, in 1874 the Commissioners promoted the transmission to Nottingham of a considerable collection of the finest specimens of lace, which has been much appreciated at that important seat of lace manufacture.

*Objects exhibited by the Colonies.*

**Colonies.**

58. In consequence of the establishment in 1872 of a Queensland annexe, an effort was made by a Committee with Mr. Childers as chairman, to establish a Colonial Court in connexion with the annual exhibitions. A plan was drawn up and an estimate framed for constructing a suitable building and maintaining it. The expense of the structure was put at 25,000*l.*, and the cost of yearly maintenance at 1,307*l.* Letters were addressed through the Colonial Office to the various colonies, and each colony was invited to contribute to the expenses in the proportion of its revenue. The result of this action may be seen in Appendix LIV., p. 181. The practical result was, however, that Victoria, New South Wales, and South Australia occupied the Belgian annexe in 1873. The objects exhibited were not confined to the industrial classes of that year, but consisted mainly of colonial produce and illustrations of colonial life. Queensland continued until the close of the Exhibitions to occupy the annexe built by her government, and the nature of the collections displayed each year were of the same description as those of the three above-mentioned colonies.

*Indian Division.*

**Indian division.**

59. Owing to the action taken by the Secretary of State for India in 1871, considerable interest was awakened in the various presidencies, and numerous committees were appointed by the

Governor-General to make collections of objects for exhibition. Unlike the colonies, India mainly confined herself each year to the classes which were specially represented. An Indian Court was built, and very interesting displays were there made each year under the direction of Dr. Forbes Watson and Dr. Birdwood.

In 1871 there was a complete show of all kinds of woollens, and the collection of Indian pottery attracted great attention. In 1872 the collection of Indian jewellery was very complete, and included specimens worn by men and women of every class. In 1873 the plain and embroidered silks constituted the chief feature of the court, and in 1874 all kinds of objects made in leather were shown.

In all four years there were abundant illustrations of Indian Art,—such as inlaid wood, ivory, and metal work. Carvings in all materials,—embroideries, miniatures, metal work and ornaments, &c.

#### *Reception of Goods.*

60. Separate days were appointed for the reception of each class of goods, and both convenience and economy were promoted by the arrangement. In the case of British goods and those of many foreign countries the objects were delivered in sufficient time to be arranged for the openings of the Exhibitions of the respective years. Past experience enabled the work of actual delivery to be conducted with promptitude, convenience, and economy. Two main entrances for heavy goods were prepared with special roads made of balks of timber, and cranes were borrowed from exhibitors. The number of foreign and colonial packages received in the four years was 10,311, whilst those of British goods were 59,579. For details of each year see Appendix LX. and LXI., p. 193, &c.

#### *Labelling.*

61. It was felt to be of the highest importance for technical instruction as well as business and convenience that the fullest information should be placed before the visitor. The principle

of labelling every object, rendering the consultation of a catalogue almost superfluous, was therefore adopted and carried out fully and laboriously, and to an extent never before attempted in any International Exhibition. Prompt labelling remedies the serious defects of catalogues, which are inevitably defective because of the late arrival of foreign objects.

*Catalogues.*

**Catalogues.** 62. Catalogues of each Exhibition, made as complete as circumstances permitted, were published punctually at the opening of the Exhibition in each year. The inevitable delays occasioned in the transmission of foreign objects, which, in some cases, did not arrive for weeks, and even months, after the days of opening, delayed the full completion of the Catalogue until nearly the end of each year's Exhibition. Each successive edition was, however, completed as far as possible, and it was found that great conveniences resulted whilst preparing and arranging the Exhibition, by putting into type as soon as received the applications for space from intending exhibitors. The Catalogues described objects, or groups of objects, together with the names of the artist, proprietor, or producer of each. In all former International Exhibitions it has been impossible to enter into such details in the Catalogues as were given; consequently such Catalogues had but a limited value. In this series the visitor might note the precise object which interested him, and give a reference to it, for purchase or otherwise. The Catalogues followed the local arrangement of groups of objects as far as possible; and when this was not the case, an indication was frequently given where the objects were to be found. Consecutive numbering to each object, or group of objects, was adopted, on account of its simplicity and facility of reference. The materials were furnished by the exhibitors, revised by experts in the several classes. Where the exhibitors named a price for their works it was generally given in the Catalogue, to save unnecessary reference to the official agents appointed to act for exhibitors in effecting sales, who were stationed in the galleries. Industrial exhibitors were

requested to state the grounds upon which they offered their goods for exhibition, as "novelty," "cheapness," "excellence of manufacture," &c. Where they did so their remarks are quoted; but it should be distinctly understood that for these remarks, and whatever may appear in the appendices to the Catalogue, the exhibitors are wholly responsible. Mr. Frank Rede Fowke acted as the general editor of the Catalogues throughout the Exhibitions. The royalty obtained on the sale of catalogues realised 8,200*l.* in the four years.

63. From the Catalogues labels were obtained for the greater part of the objects. The labels were made to indicate by coloured borders the country from which the object came.

#### *Reports.*

64. In the scheme brought before the Commissioners on the *Reports*, 18th July 1868, it was proposed by the promoters of it (see § 6, p. vi.). "That all works should be admitted by the award of competent judges, that no prizes should be awarded, but that discriminating Reports should be made and published as soon as possible after the opening of the Exhibition to serve as guides during its existence." Accordingly arrangements were made to publish such Reports for the Exhibition of 1871. A Committee was appointed consisting of Sir C. W. Dilke, Sir F. R. Sandford, Mr. Cole, Mr. G. Grove, Mr. William Longman, Mr. John Murray, Mr. Philip C. Owen, and Col. Scott, to consider the mode of publishing the Catalogues and the Reports, with the view of making such publications self-supporting.

65. A number of gentlemen acquainted with the technical details of the various classes in Fine Arts, manufactures, and scientific inventions were invited to prepare the Reports, and in accordance with the practice in the Exhibitions of 1851 and 1862 a general editor was appointed, and the Commissioners owe their thanks to Lord Houghton for his kind acceptance of the office and for the sound judgment which he exercised in the performance of it. Two volumes were published during the Exhibition of 1871, and there is no doubt contributed to its usefulness and to the interest which the public took in it.

But the difficulties of the punctual execution were found to be great. The Reports, like those of all former Exhibitions, did not pay the expenses of production, and they were not produced by the Commissioners after 1871, but were undertaken by the Society of Arts and published from time to time in its journal. Indeed it was again proved that the excellence of the Reports published with promptitude by the daily press was such as to render almost unnecessary the official publication of such Reports.

*Certificates and Medals.*

Certificates  
and medals.

66. It had been decided by the Commissioners that no prizes should be awarded, but it was thought that the presentation of a certificate or a medal, testifying that the exhibitor had contributed to the Exhibition, would be an acceptable recognition of his services. In the two first years a certificate designed by Mr. F. W. Moody was given. In 1873 a gilt medal was presented instead of the certificate: Mr. F. Miller modelled the design of the head of His Royal Highness the Prince of Wales, as President, for the obverse of the medal, and Mr. John Gamble designed the reverse. In 1874 it was decided to present the exhibitors with a bronze medal; for the obverse of which Mr. Boehm modelled the head of His Royal Highness the President, whilst the reverse was the same as that adopted in 1873.

*Precautions against Fire.*

Precautions  
against fire.

67. Effective watching, the most important precaution against fire, was provided through the officers and men of the Royal Engineers. Fifty-eight hydrants were fixed in as many different parts of the buildings, besides 32 fire extinguishers, and 163 buckets always kept filled with water. The necessary supply of tools, axes, saws, pincers, chisels, &c., and hand-lamps were kept ready for use. A guard of men of the Royal Engineers slept in the building. In 1871 an outside painters' shed was burnt down, and in 1874 a flue burst, but it was discovered in time to prevent serious damage. Three

fires also occurred, one occasioned by the breaking of an oil lamp, a second by an escape of gas, and the third by the ignition of a loose rag on hot metal. No serious damage happened in any case (see Appendix XLVI., p. 172).

*Police.*

68. The Metropolitan Police, as in the Exhibitions of 1851 *Police.* and 1862, greatly assisted in keeping order and insuring the safety of objects. Their conduct deserves high praise. The numbers employed each year are given in the Appendix (L., p. 176).

*Custom House Arrangements.*

69. With a view to obtaining special facilities in respect of *Customs.* the admission and delivery of foreign exhibits, a communication was addressed in November 1870 to the Commissioners of H.M.'s Customs, requesting that arrangements might be made of as simple a character as possible for granting to these Exhibitions concessions similar to those accorded in the Exhibition of 1862. A code of regulations was framed by the late Surveyor-General of Customs, H. C. Brown, Esq., under the provisions of which, packages of foreign and colonial goods on arrival either at London or at any other port in the United Kingdom, if officially addressed to the Secretary or to the Executive Officers of the Exhibition, were to be at once forwarded, without entry or examination, to the charge of the "Principal Officer of Customs at the Exhibition Building," in whose presence they were to be opened and an account taken for the Crown. The Exhibition Galleries, &c. were also constituted a bonded warehouse for the time being, and all articles liable to duty were exempted from payment thereof so long as the Exhibition for the year remained open, and the articles were not removed. At the close of each year such goods were returned to their respective countries free of duty, which was charged only on those goods that were sold or were retained in England for other reasons. These regulations were adopted in the Exhibitions of 1871, 1872, and 1873.

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In 1874 supplementary Customs Regulations were deemed necessary in consequence of visitors being allowed to taste and purchase samples of wine exhibited in the class of foreign wines. These additional regulations were framed by the Surveyor-General, R. A. Ogilvie, Esq., C.B., and they required that the duties on all wines deposited in the vaults should be secured either by payment on deposit, or by a bond to be given by the owner or exhibitor for the ultimate payment. In all other material respects the regulations of the previous Exhibitions remained in force in 1874 also, and from the simplicity which characterised them, and the liberal spirit in which they were applied by Mr. G. H. Scrivenor, the principal officer in charge, entire satisfaction was given to Foreign Commissioners and Exhibitors and to all other persons concerned.

*Prices of Admission.*

Prices of admission.

70. The tables in the Appendix (LVI., LVIII., and LIX.) show the various prices of admission chargeable in each year. The total net amount realised by all season tickets was 12,148*l.*, whilst other admissions realised 120,187*l.* In 1874 experiments were tried with a penny admission and a threepenny admission. The penny admission realised an average weekly receipt of 24*l.*, whilst the threepenny admission realised 242*l.*, and the shilling admission realised weekly 53*l.* (see p. 190 of the Appendix).

*Refreshments, Publications, Waiting Rooms, Lift, &c.*

Refreshments, publications, lift, &c.

71. The incidental sources of receipt at Exhibitions are always productive. In this series, they produced from all sources upwards of 24,000*l.* out of a total of 159,467*l.* In the case of the Crystal Palace at Sydenham, the payment of a dividend is due to the amount of the incidental receipts.

*Financial Results.*

Financial results.

72. The audited accounts of the receipts and expenditure of each year 1871, 1872, 1873, and 1874, show that the Commissioners embarked on these Exhibitions a capital of 151,186*l.*, out of which they expended on buildings and fittings the sum

of 126,383*l.* Deducting this amount from 151,186*l.*, there remains a sum of 24,803*l.*, which has provided for the deficiency on the annual working expenses up to 31 Dec. 1874. The revenue accounts of each year show that the total receipts have been 159,900*l.*, whilst the expenditure has been 175,907*l.*, leaving a deficiency of 16,007*l.*, reduced to 12,662*l.* by the cost of purchases unsold (see Appendix LXV. and LXVI., p. 208, &c.).

*Prices and Sales.*

73. The Commissioners decided that exhibitors were to be at liberty if they saw fit to affix prices to their objects, and the permission was very largely used throughout the whole of the Exhibition. Whilst the publication of prices seems to be entirely in accordance with the wishes and interests of the public at large intermediate agents dislike it. It is not to be doubted that without the motive of sale being allowed to have free action, an exhibition of new objects in the present day, either of Fine Art or industry, could not be efficiently made, and if made would not be approved by the public. By degrees convenient arrangements have been adopted at the Royal Academy and other Fine Art exhibitions, at agricultural and other exhibitions, where prices of objects may be learnt and sales effected. The motive of the French and Belgian Commissioners in erecting their supplementary buildings was avowedly to promote the commercial interests of France and Belgium. The more the public at large learn to appreciate works of Science and Art, the more they desire to possess them, and the greater should be the facilities of purchase. The knowledge of the price therefore becomes a most important consideration. At the close of the Exhibition of 1874, the Commissioners allowed a sale by auction to be held, and a large sum was realised by the sale of works of art of Belgium and of other countries.

74. To afford the public facilities for obtaining objects at the close of the Exhibition and to register exhibits selected for purchase, clerks were employed in various parts of the building, *viz.*, they attended from 9.30 a.m. to 6 p.m., and assisted pur-

chasers under the rules framed in accordance with the practice followed at the Royal Academy exhibitions.

### *Technical Instruction.*

#### *Technical instruction.*

75. It was the constant aim of the Commissioners throughout the Exhibitions to adopt measures for making each Exhibition as conducive as possible to the advancement of technical instruction. Several meetings of persons interested in the respective industries were held. The meeting for silk was largely attended. Lectures upon the objects exhibited, in many instances before the objects themselves, were given, but, excepting those on cookery, none were successful. In 1873 three scholarships of the value of 50*l.* each were offered to persons who had passed the technological examinations instituted by the Society of Arts, to enable them to study at some place of scientific instruction, such as the Royal School of Mines, the Royal College of Science, Dublin, Owen's College, Manchester, or the Universities, or to travel abroad. These scholarships were to be appropriated to the subjects of silk, steel, and carriages, being the three industries exhibited this year. Two of these scholarships were awarded. A paper specially referring to these industries and that of food was circulated to the companies of the city of London (see Appendix IX., p. 73).

76. In July 1873, His Royal Highness the Prince of Wales invited the Lord Mayor and the heads of the city companies to come to Marlborough House for the purpose of discussing what assistance the companies might be able to give. Much cordial readiness was expressed at the meeting to promote the object, and subscriptions were sent by several of the leading companies. The Commissioners issued an announcement to encourage the formation of a National Association for the Promotion of Technical Instruction (see Appendix IX., p. 73). It is to be regretted that these efforts, although appreciated by artizans and others who were specially interested in them, failed to arouse the attention of the general public to their great importance to industrial progress.

76a. The Institution of Civil Engineers held two successful evening meetings when the galleries were lighted up and the machinery exhibited in motion.

*Purchases.*

77. It was intended that if the financial success of the Purchases. Exhibitions permitted it, objects should be bought by the Commissioners to be circulated for the benefit of local Museums and Schools. Accordingly, the Exhibition of 1871 having yielded sufficient profits, it was resolved that Sir Francis R. Sandford, Sir M. Digby Wyatt, Mr. Cole, Mr. Gibson, Dr. Playfair, and Mr. Redgrave, should be the Committee for recommending purchases from that Exhibition. About 3,000*l.* were expended in the purchase of objects out of the Exhibition of 1871. These objects, with some others, are held on loan by the South Kensington Museum for circulation to local museums and schools. In the year 1872, collections of peasant jewellery were purchased from foreign countries not likely to send them. These have since been sold to the South Kensington Museum, where they have tended to complete a representation of jewellery which is quite unrivalled in any other museum.

*Gifts.*

78. Several gifts of objects were made to the Commissioners Gifts. as was done in the Exhibition of 1851. But the Commissioners were unable to accept many.

*Conclusion.*

79. After the state of the financial results of the Exhibition of Conclusion. 1873 had been sufficiently ascertained, the Commissioners met in March 1874 to consider the prospects of the fourth Exhibition about to be held. At this meeting the Earl of Carnarvon, who had acted as the Chairman of the Board of Management for about a year, tendered his resignation, having accepted office as Her Majesty's secretary of state for the colonies, and he laid before the Commissioners his views of the state of the affairs of the Commission. He said that when, by the wish of His Royal Highness, he undertook the duties of that position, he found that he had undertaken an arduous task

and one surrounded by difficulties ; and he now relinquished them with the work only half done, and with the difficulties still unvanquished, and perhaps even greater than ever. He considered that the future conduct of the affairs of the Commissioners would require constant attention, care, and wariness ; the property in the trust of the Commissioners was large, and the interests involved in its administration large and most important. He then proceeded to comment on the principal subjects dealt with by the report, commencing with the financial statement of the results of the three past Annual International Exhibitions. With reference to the expenditure on the capital account, which had been incurred in providing permanent buildings, machinery, and fittings for the Exhibitions, and had been met by votes made at various times by the Commissioners out of funds raised by mortgage of their estate, he thought it might be assumed that they had received the value of their money. The revenue account appeared at first sight to show a satisfactory result, the two sides nearly balancing each other ; but a closer examination would detect signs from which unsatisfactory inferences must be drawn. He pointed out that the Exhibition of 1871 had resulted in a profit of about 17,000*l.* ; a profit which had been swallowed up by the losses entailed by the Exhibitions of the two succeeding years. These losses had reduced the balance of profit on the three years to a merely nominal amount. The deficiency in the last two years had not been caused by undue expenditure, for the expenditure had been reduced to the lowest point consistent with efficiency, but by the great decrease in the receipts for 1872 and 1873 as compared with those for 1871 ; a decrease which was explained by the diminution in the number of visitors. He thought it necessary to mention these facts in the most explicit manner, though they were clearly set forth in the report of the Board of Management, in order that he might not be charged with having shrunk from bringing the true financial position of the Annual Exhibitions before the Commissioners. On the other hand, it was fair to point out that large sums charged on the revenue of the Exhibitions consisted of payments to the Royal Horticultural Society and the Royal Albert Hall ; but he thought

the Commissioners would do right to look on the property held by those institutions as part of one general system with the Annual Exhibitions. With regard to the scheme of Annual Exhibitions, he was quite satisfied of their value as instruments of education, but he was bound to say that it appeared to him that, regarded simply as a financial undertaking, the success of the first year had not been maintained. The Exhibition of 1874 had been launched beyond recall, but he suggested that no further Exhibition should be embarked upon until it was seen how that of the present year turned out during the first two months; and if no improvement appeared over that of last year, he thought the Commissioners would do well to consider whether any and what modifications of the scheme should be made. In all probability the success of the Exhibition of 1873 had been affected by the one held in Vienna; but he thought that by the 1st of June it could be seen whether the depression which characterised that Exhibition was likely to continue for the future. If the advice he offered were accepted, care would have to be taken that no obligation or liability should be contracted with regard to an Exhibition in any subsequent year until the future action of the Commissioners was settled. Lord Carnarvon next passed on to the relations between the Commissioners and the Royal Horticultural Society, which were in an unsatisfactory condition. With reference to the subject of an organized scheme of technical instruction through the medium of the Annual Exhibitions, in which his Royal Highness the president had taken so much interest, Lord Carnarvon stated that the city companies had, as he believed, applied themselves heartily to the work; and if the Exhibitions should continue he thought the Commissioners would derive great benefit from the co-operation of those bodies.

80. The apprehensions entertained of the financial result of the Exhibition of 1874 were realized, and after two months experience, it was decided that the Exhibition of 1874 should be the last of the series. At its close it appeared that the receipts had considerably fallen below those in 1873. Summing up briefly the results of the four exhibitions,—

Summary of  
receipts and  
numbers of  
visitors.

81. The receipts and number of visitors to each of the Exhibitions were as follows (Appendix LXV., p. 208):

—	Gross receipts.	Total Number of Visitors.
	<i>£      s.      d.</i>	
1871	76,433 16 11	1,142,154
1872	39,306 0 6	647,160
1873	27,761 16 8	499,842
1874	16,399 2 3	466,745

82. The question naturally presents itself to what causes might this progressive decline be attributed. The success of 1871 had greatly surpassed expectations, when the estimates of the receipts were made. But there were two circumstances which made this success exceptional. Nine years had elapsed since an International Exhibition had taken place and novelty had much to do with its attractiveness. The Exhibition of 1871 was opened with a state ceremony presided over by His Royal Highness the Prince of Wales. The original scheme of combining the Exhibition with the Horticultural Gardens and the Royal Albert Hall was carried out in 1871, which became impossible in the following years. Visitors to the Exhibition had admission to the Gardens on easy terms, or without extra charge.

83. It was hardly to have been expected that the receipts for each following year would be maintained at the same amount. There was accordingly a considerable decline in the year 1872, but still the amount taken was more than sufficient to defray the actual charges of management.

Difficulties  
with Royal  
Horticultural  
Society.

84. In 1873 there was a still further and more serious decline in the receipts, owing to the difficulties raised by the Horticultural Society. The visitors were excluded from the use of the Gardens by a prohibitive charge, and could only cross the Gardens at one passage in the open air, and for this privilege the Commissioners paid the sum of 1,000*l.* The privilege was so little used by the visitors that it was

not worth purchase for the Exhibition of 1874. In this year the conveniences of circulation were still further diminished, and the Horticultural Society demanded and received a payment of 750*l.* for the right of passage only over the quadrants and through the orchard houses which the funds of the Commissioners had paid for. It cannot be doubted that the restrictive barriers throughout the Exhibition, which precluded the visitor not only from using the gardens at all but increased greatly the distances, fretted the visitors and damaged the receipts.

85. An exhibition to be remunerative should be attractive, and pleasurable to the general public, but the exhibitions since 1871, owing to the causes above stated, had ceased to be pleasurable.

86. I would submit that it cannot be said that a conclusive <sup>Imperfect</sup> <sub>experiments.</sub> trial has been given to the experiment of a series of annual International Exhibitions. The chances of success would probably have been increased had it been possible to have given effect to various suggestions the desirability of which had appeared at different times. Thus, a guarantee, suggested in 1869, would have created an interest and enlisted public support for the work (see p. v.). The intention of managing the Exhibitions, the Horticultural Gardens, and the Hall as an unity was frustrated. The connexion of the railway with the Exhibition and Hall was not made; even a covered passage from the railway for pedestrians was not made. A communication between the Exhibition and the South Kensington Museum was not made. The carriage approaches at the north—contemplated when the Royal Albert Hall was decided on—were not made. The refreshment rooms were inconveniently placed, and defective in proper accommodation. The public suffered inconveniences accordingly, and became more and more alienated, although the respective Exhibitions themselves each year became more complete and instructive. Thus, in the last Exhibition nothing was wanting to complete the exhibition of lace, both ancient and modern, and its processes, as well as that of wines, both of which had been unequalled in any former Exhibitions; and, in the preceding year, the exhibition

of carriages was the most extensive and complete of any that had ever been made.

Financial loss.

87. The financial loss occasioned by the series of four years Exhibitions, after taking credit for value of purchases of art objects in hand (3,364*l.*), has been under 13,000*l.* This is independent of the investment of 126,383*l.* in the works specified on p. 209, and chargeable to capital account. If these Exhibitions be viewed from the point of public instruction as Collections showing the progress of Art and Science applied to the productive industry of the day, this sum divided over the total number of visitors to the Exhibitions (2,755,900) amounts only to a subsidy of little more than a penny a head. And this result contrasts very favourably with the cost of all educational efforts, and especially with the aid voted by Parliament to attract visitors to the National Museums. At the British Museum the cost per visitor is nearly 4*s.* each, and at the South Kensington Museum it is about 1*s.* 3*d.* The conclusion must be that Industrial Exhibitions treated as instruments of public instruction entail much greater financial risks than if mere popularity were made the first consideration. No International Exhibition has had the pecuniary success and popularity of the first in 1851, and years of experience of Exhibitions in all parts of the world show that it still remains a model for imitation.

88. Any further experiment in continuing the late series of annual International Exhibitions entailed risks which the present state of the annual income at the disposal of the Commissioners did not appear to justify, and I did not hesitate, when the Commissioners asked my opinion, to advise, though I did so with regret, their discontinuance. I felt that the Exhibitions had rendered benefits to Science and Art applied to productive industry, and had been an experiment which fully deserved trial and its cost; and I am bound to say, expressing my own conviction only, that if the plan as originally projected could have been carried out in its entirety, by working the Exhibitions, the Albert Hall, and the Royal Horticultural Gardens as an unity, the Exhibitions would have succeeded and become

a permanent and at least a self-supporting institution in the country.

89. I have thus endeavoured to render a brief account of the proceedings taken in respect of four annual International Exhibitions. I submit that they have helped to bring into useful comparison modern works of Science and Art produced by various nations, and may be said to have promoted Science and Art applied to productive industry. In conclusion, I beg leave to use the words of the Commissioners of the Great Parent Exhibition of 1851, and to say that in a limited degree "these Exhibitions have been some means of advancing the happiness and prosperity not only of this but of all other countries, and of strengthening the bonds of peace and friendship throughout the world."

(Signed) **HENRY COLE.**

Royal Albert Hall,  
6th May 1875.

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# APPENDIX.

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## APPENDIX I.

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### LIST OF HER MAJESTY'S COMMISSIONERS FOR THE EXHIBITION of 1851, from the Formation of the Commission to the present Time.

Com.  
missioners  
appointed for  
Exhibition  
of 1851.

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#### PRESIDENTS OF THE ROYAL COMMISSION.

His Royal Highness the Prince Albert, K.G. Appointed 3rd January 1850. Died December 1861.

Succeeded by

The Right Honourable Edward Geoffrey, 14th Earl of Derby, K.G. Appointed Member of the Commission 3rd January 1850. Elected President 16th April 1864. Died 1869.

Succeeded by

His Royal Highness the Prince of Wales, K.G. Elected Member of the Commission, and President, 18th February 1870.

#### ORDINARY MEMBERS OF THE ROYAL COMMISSION.

Elected 16 Feb. 1872 - His Royal Highness the Duke of Edinburgh, K.G. (Chairman of General Purposes Committee, 6th March 1872 to its dissolution, 6th December 1872. Chairman of Board of Management, 13th August 1872 to 16th December 1872.)

„ 16 Feb. 1872 - His Royal Highness the Duke of Connaught, K.G.

„ 18 Feb. 1870 - His Royal Highness the Prince Christian, K.G. (Acting Chairman of General Purposes Committee, 7th February 1871 to 16th June 1871.)

„ 21 Oct. 1872 - His Royal Highness the Duke of Cambridge, K.G.

„ 18 July 1870 - His Serene Highness the Duke of Teck, G.C.B.

Appointed by Royal Commission—

3 Jan. 1850 - The Duke of Buccleuch, K.G.

„ - - The Earl of Rosse, K.P. Died 1868.

„ - - The Earl Granville, K.G. (Chairman of Finance Committee from 24th January 1850 to its ceasing to act, 13th August 1872.)

Com- missioners appointed for Exhibition of 1851.	Appointed by Royal Commission—	
	3 Jan. 1850	The Earl of Ellesmere. Died 1862.
	"	The Earl Russell, K.G.
	"	The Right Hon. Sir Robert Peel, Bart. Died July 1850.
	"	The Lord Taunton. Died 10 Feb. 1870.
	"	The Right Hon. W. E. Gladstone.
	"	Sir Richard Westmacott. Died 1857.
	"	Thomas Baring, Esq. Died 1873.
	"	Sir Charles Barry. Died 1860.
	"	Sir Thomas Bazley, Bart.
	"	Richard Cobden, Esq. Died 1865.
	"	Sir Charles Lock Eastlake, P.R.A. Died 1866.
	"	Thomas Field Gibson, Esq.
	"	John Gott, Esq. Died 1867.
	"	The Lord Overstone.
	"	Philip Pusey, Esq. Died 1856.
	"	Alderman William Thompson. Died 1855.
	Appointed by Royal Charter, 15 Aug. 1850	Robert Stephenson, Esq. Died 1859.
	Elected 5 March 1851	Sir Charles Lyell, Bart. Died 1875.
	" 14 Jan. 1852	Sir William Cubitt. Died 1862.
	" 24 April 1852	Sir Charles Wentworth Dilke, Bart. Died 1869.
	" 24 April 1852	John Shepherd, Esq. Died 1859.
	" 24 April 1852	The Right Hon. Sir Alexander Y. Spearman, Bart. Died 1874.
	" 29 June 1852	Walter Coulson, Esq., Q.C. Died 1861.
	" 25 Jan. 1853	The Right Hon. Benjamin Disraeli.
	" 30 June 1855	Sir Roderick I. Murchison, Bart., K.C.B. Died 1871.
	" 14 Feb. 1857	The Viscount Portman.
	" 1 May 1858	The Right Hon. Sir George Cornewall Lewis, Bart. Died 1863.
	" 3 May 1861	The Duke of Buckingham and Chandos.
	" 3 May 1861	Sir Thomas Fairbairn, Bart.
	" 3 May 1861	Sir Henry Thring, K.C.B. Resigned 25 Mar. 1874.
	" 30 June 1863	The Right Hon. Robert Lowe.
	" 30 June 1863	The Right Hon. Sir Stafford H. Northcote, Bart., C.B.
	" 30 June 1863	Sir Morton S. Peto. Resigned 15 Aug. 1867.
	" 30 July 1866	The Lord Aberdare.
	" 30 July 1869	Sir Francis Grant, P.R.A.
	" 8 July 1869	Edgar A. Bowring, Esq., C.B.
	" 8 July 1869	General the Hon. Charles Grey. Died 1870.
	" 8 July 1869	Sir Francis R. Sandford, C.B.
	" 8 July 1869	The Right Hon. Lyon Playfair, C.B.
	" 18 Feb. 1870	Edward Henry, 15th Earl of Derby. Resigned 9 Mar. 1875.
	" 12 May 1870	Major-General Sir Thomas M. Biddulph, K.C.B.
	" 12 May 1870	Major-General Henry F. Ponsonby.
	" 18 July 1870	The Marquis of Ripon, K.G. (Chairman of General Purposes Committee from 4th November 1869, being then an ex-officio Commissioner, to 6th March 1872.)
	" 18 July 1870	Sir William Tite. Died 1873.
	" 18 July 1870	Alexander J. B. Beresford Hope, Esq.
	" 13 Aug. 1872	Sir William G. Anderson, K.C.B.
	" 13 Aug. 1872	Henry Cole, Esq., C.B. Resigned 17 June 1873.
	" 21 Oct. 1871	The Marquis of Lansdowne.
	" 22 Feb. 1873	The Earl of Carnarvon. (Chairman of Board of Management from 22nd February 1873 to 25th March 1874.)
	" 22 Feb. 1873	The Right Hon. Hugh C. E. Childers.
	" 22 Feb. 1873	Sir Anthony de Rothschild, Bart.
	" 22 Feb. 1873	Sir Richard Wallace, Bart.
	" 22 Feb. 1873	The Right Hon. Sir Henry Bartle E. Frere, G.C.S.I., K.C.B.
	8 Dec. 1873	General the Right Hon. Sir William T. Knollys, K.C.B.

## APPENDIX I.

3

Elected	8 Dec.	1873	Major-General Probyn, C.B., V.C.	
"	25 Mar.	1874	The Earl Spencer, K.G. (Appointed Chairman of the Board of Management 25th March 1874.)	Com-missioners appointed for Exhibition of 1851.
"	9 May	1874	The Earl of Rosebery.	

### EX-OFFICIO COMMISSIONERS.

#### Appointed by Royal Commission

3 Jan. 1850	- The Chairman of the Court of Directors of the East India Company. Ceased 1858.
"	- The President of the Geological Society of London.
"	- The President of the Institution of Civil Engineers.
Elected 23 Feb. 1853	- The Lord President of the Council.
" "	- The First Lord of the Treasury.
" "	- The Chancellor of the Exchequer.
" "	- The President of the Board of Trade.
" 14 Feb. 1857	- The First Commissioner of Her Majesty's Works.
	- The Vice-President of the Committee of Council on Education.

## APPENDIX II.

### COPIES OF THE OFFICIAL DIRECTORIES FOR EACH YEAR OF THE INTERNATIONAL EXHIBITIONS.

Official Directory of 1871.

### OFFICIAL DIRECTORY, 1871.

#### LIST OF HER MAJESTY'S COMMISSIONERS.

H.R.H. the Prince of Wales, K.G., *President*.  
 H.R.H. the Prince Christian, K.G.  
 H.S.H. the Prince of Teck, G.C.B.  
 The Marquis of Ripon, K.G.  
 The Duke of Buccleuch, K.G.  
 The Duke of Buckingham and Chandos.  
 The Earl of Derby.  
 The Earl Granville, K.G.  
 The Earl Russell, K.G.  
 The Lord Portman.  
 The Lord Overstone.  
 The Right Hon. William Ewart Gladstone, M.P.  
 The Right Hon. Benjamin Disraeli, M.P.  
 The Right Hon. Robert Lowe, M.P.  
 The Right Hon. Sir Stafford H. Northcote, Bart., C.B., M.P.  
 The Right Hon. Henry A. Bruce, M.P.  
 The Right Hon. Chichester S. Fortescue, M.P., or President of the Board of Trade for the time being.

The Right Hon. William E. Forster, M.P., or Vice-President of the Committee of Council on Education for the time being.  
 The Right Hon. Sir Alexander Y. Spearman, Bart.  
 The Right Hon. Acton S. Ayrton, M.P., or First Commissioner of Her Majesty's Works for the time being.  
 Sir Charles Lyell, Bart.  
 Sir Roderick I. Murchison, Bart., K.C.B.  
 Sir Thomas Bazley, Bart., M.P.  
 Major-General Sir T. M. Biddulph, K.C.B.  
 Sir Francis Grant, P.R.A.  
 Sir Francis R. Sandford, C.B.  
 Sir William Tite, M.P.  
 Thomas Baring, Esq., M.P.  
 Edgar A. Bowring, Esq., C.B., M.P.  
 Thomas Fairbairn, Esq.  
 Thomas Field Gibson, Esq.  
 Alexander J. B. Beresford Hope, Esq., M.P.  
 Dr. Lyon Playfair, C.B., M.P.  
 Colonel Henry F. Ponsonby.  
 Joseph Prestwich, Esq., F.R.S., or President of the Geological Society for the time being.

▲ 2

Official Directory of 1871.

**Henry Thring, Esq.**  
Charles B. Vignoles, Esq., F.R.S., or President of the Institution of Civil Engineers, for the time being.

**Secretary.**—Major-General Henry Y. D. Scott, C.B.

**Clerk.**—L. C. Sayles, Esq.

**FINANCE COMMITTEE.**

**The Earl Granville, K.G., Chairman.**  
The Marquis of Ripon, K.G.  
The Lord Overstone.  
The Right Hon. William Ewart Gladstone, M.P.  
The Right Hon. Benjamin Disraeli, M.P.  
The Right Hon. Robert Lowe, M.P.  
The Right Hon. Sir Stafford H. Northcote, Bart., C.B., M.P.  
The Right Hon. Henry A. Bruce, M.P.  
The Right Hon. William E. Forster, M.P., or Vice-President of the Committee of Council on Education for the time being.  
The Right Hon. Sir Alexander Y. Spearman, Bart.  
Sir Francis R. Sandford, C.B.  
Thomas Baring, Esq., M.P.  
Edgar A. Bowring, Esq., C.B., M.P.  
Thomas F. Gibson, Esq.  
Dr. Lyon Playfair, C.B., M.P.  
Henry Thring, Esq.

**GENERAL PURPOSES COMMITTEE,**  
APPOINTED TO CARRY OUT THE SERIES OF ANNUAL INTERNATIONAL EXHIBITIONS.

**The Marquis of Ripon, K.G., Chairman.**  
H.R.H. the Prince Christian, K.G.  
H.S.H. the Prince of Teck  
The Marquis of Lansdowne.  
The Earl Granville, K.G.  
The Lord Northbrook.  
The Right Hon. Sir Stafford H. Northcote, Bart., C.B., M.P.  
The Right Hon. Henry A. Bruce, M.P.  
The Right Hon. William E. Forster, M.P.  
Sir Francis R. Sandford, C.B.  
Edgar A. Bowring, Esq., C.B., M.P.  
Henry Cole, Esq., C.B.  
Thomas F. Gibson, Esq.  
Dr. Lyon Playfair, C.B., M.P.  
Colonel Henry F. Ponsonby.  
Henry Thring, Esq.

**Clerk**—T. A. Wright, Esq.

**SECRETARIAT.**

**Correspondence**—F.W. Madden, Esq.  
R. R. Alexander, Esq.  
F. Webb.

**Registrar**—W. Manser.

**Registrar of Applications**—G. A. Crickitt, Esq.

**Clerks**—E. Spear.  
J. G. W. Smythe.  
A. Rickard.  
J. G. Bateman.  
W. S. Broome.  
D. Ruddock.

**ACCOUNTANT.**  
James Richards, Esq.

**FINANCE.**  
Captain Maunsell.

**DEPUTY COMMISSIONERS, BEING OFFICERS APPOINTED FOR EXECUTIVE ARRANGEMENTS.**

Professor Archer; Collection of Scotch wool-lens.  
Lieutenant Clayton, R.E.; Labelling, General Order throughout the Exhibition, Pottery.  
Lieutenant J. J. Curling, R.E.; Fans, Telegraphy, Clocks, etc.  
J. Cundall, Esq.; Publications.—Catalogue.  
Lieutenant Davies, R.E.; Reception of Goods and Verdicts of Judges.  
Lieutenant Grover, R.E.; Building and Works, Machinery and Processes, New Scientific Inventions.  
Lieutenant Harris, R.E.; Foreign Arrangements.  
Captain Maitland, R.E.; Fire Arrangements and Military Working Parties.  
Captain Martin, R.E.; China and Japan.  
G. R. Redgrave, Esq.; Architecture.  
S. Redgrave, Esq.; Painting and Sculpture.  
Lieutenant Seton, R.E.; Woollens.

**PROVISIONAL OFFICERS ASSISTING OCCASIONALLY.**

E. P. Bartlett, Esq.; Education.  
G. C. T. Bartley, Esq.; Education.  
H. A. Bowler, Esq.; Engraving and Foreign Fine Art.  
T. Chesman, Esq.; Education.  
T. Clack, Esq.; Pottery.  
A. S. Cole, Esq.; All Miscellaneous Art and Reproductions.  
Captain Donnelly, R.E.; Education and Reporters.  
Captain Festing, R.E.; Refreshment Rooms.  
F. R. Fowke, Esq.; Catalogue.  
J. F. Iselin, Esq.; Education.  
A. C. King, Esq.; Education.  
H. Sandham, Esq.; Machinery and Processes.  
R. F. Sketchley, Esq.; Painting and Sculpture.  
A. J. R. Trendell, Esq.; Literary Assistance.

**HER MAJESTY'S CUSTOMS.**

H. C. Brown, Esq.; Surveyor-General.  
G. H. Scrivenor, Esq.; Officer in Charge.

**GENERAL EDITOR OF REPORTS.**

The Lord Houghton.  
**Assistant**—A. C. King, Esq.

**Readers**—Miss Meteyard.  
C. Tomlinson, Esq.  
Sydney Whiting, Esq.

## REPORTERS.

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 Professor T. C. Archer; Woollen Fabrics; Worsted Fabrics.  
 L. Arnoux, Esq.; Pottery, Parian, and Miscellaneous.  
 E. P. Bartlett, Esq.; Education: Books, Maps, etc.  
 G. C. T. Bartley, Esq.; Education: Appliances for Physical Training.  
 P. Bawden, Esq.; New Machinery and Processes.  
 Professor F. R. Bradley; Education: Models of Machinery, Building, Construction, etc.  
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 Lieutenant Cole, R.E.; Reproductions.  
 Lieutenant Davies, R.E.; Pottery: Stoneware.  
 Lieutenant English, R.E.; Prime Movers.  
 C. Drury Fortnum, Esq.; Pottery: Earthenware.  
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 T. J. Gullick, Esq.; Engraving on Wood.  
 J. Hullah, Esq.; Education: Music.  
 J. F. Iselin, Esq.; Education: Specimens and Illustrations of Modes of Teaching.  
 E. C. Johnson, Esq.; Education: Miscellaneous Work in Schools for Blind, Deaf, and Dumb.  
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 G. Leach, Esq.; Machinery for Woollen and Worsted Manufactures.  
 Sir Coutts Lindsay, Bart.; Painting in Oil.  
 C. Magniac, Esq., M.P., and R. H. Soden Smith, Esq.; Pottery: Porcelain.  
 J. Marshall, Esq.; Engraving.  
 Rev. M. Mitchell; Education: Specimens of School Work.  
 Gambier Parry, Esq.; Stained Glass and Mosaics.  
 J. H. Pollen, Esq.; Furniture, Iron and Metal Working, Tapestries, Carpets.  
 G. R. Redgrave, Esq.; Terra Cotta and Bricks.  
 R. Redgrave, Esq., R.A.; Designs for Decorative Manufactures.  
 S. Redgrave, Esq.; Painting in Water Colour.  
 Mrs. H. Reeve; Lace.  
 The Rev. Canon Rock; Embroideries.  
 H. Sandham, Esq.; Traction Engines.  
 W. B. Scott, Esq.; Miscellaneous Art in Class II.  
 T. Roger Smith, Esq.; Architectural Designs, Drawings, and Models.  
 G. Stewart, Esq.; Education: Drawing and Design, Modelling in Clay, etc.  
 Colonel Stuart-Wortley; Photography.  
 Professor R. J. Westmacott, R.A.; Sculpture.  
 Sir M. Digby Wyatt; Painting: Miscellaneous Art.

## FOR INDIA.

George Smith, Esq., LL.D.; Education.  
 J. Forbes Watson, Esq., M.D.; Fine Arts, etc.

## COMMITTEES FOR CONSIDERING THE MODE OF APPOINTING COMMITTEES OF SELECTION FOR WORKS OF FINE ART.

Official Directory of 1871.

## FOR PAINTING.

The Viscount Bury, M.P.  
 The Lord Elcho, M.P.  
 Sir Coutts Lindsay, Bart.  
 Sir William Boxall, R.A.  
 Richard Redgrave, Esq., R.A.

## FOR SCULPTURE.

The Viscount Bury, M.P.  
 The Lord Elcho, M.P.  
 Sir Coutts Lindsay, Bart.  
 John Bell, Esq.  
 Richard Westmacott, Esq., R.A.

## FOR ARCHITECTURE.

The Viscount Bury, M.P.  
 The Lord Elcho, M.P.  
 Sir Coutts Lindsay, Bart.  
 Sir William Tite, M.P.  
 Alexander J. B. Beresford Hope, Esq. M.P.

## COMMITTEES OF SELECTION.

## PAINTING.

The Viscount Bury, M.P.  
 The Lord Elcho, M.P.  
 Sir Coutts Lindsay, Bart.  
 Alfred Elmore, Esq., R.A. (representing the Royal Academy).  
 Alfred Clint, Esq. (representing the Society of British Artists).  
 Alfred Hunt, Esq. (representing the Society of Painters in Water Colours).  
 Henry Warren, Esq. (representing the Institute of Painters in Water Colours).  
 F. Dillon, Esq.  
 H. S. Marks, Esq., A.R.A.

## SCULPTURE.

The Viscount Bury, M.P.  
 The Lord Elcho, M.P.  
 Sir Coutts Lindsay, Bart.  
 William C. Marshall, Esq., R.A. (representing the Royal Academy).  
 John Bell, Esq.  
 Richard Westmacott, Esq., R.A.

## ARCHITECTURE.

The Viscount Bury, M.P.  
 The Lord Elcho, M.P.  
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tory of 1874.

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## APPENDIX III.

## ANNOUNCEMENTS OF THE EXHIBITIONS.

Announcement in 1869 of 1871. ANNOUNCEMENT of the FIRST OF THE SERIES OF INTERNATIONAL EXHIBITIONS in 1871, issued 23rd JULY 1869. No. 1.

ANNUAL INTERNATIONAL EXHIBITIONS of selected WORKS of FINE and INDUSTRIAL ART and SCIENTIFIC INVENTIONS, under the direction of HER MAJESTY'S COMMISSIONERS FOR THE EXHIBITION OF 1851. The first of the series will be held in 1871.

FOR LIST OF HER MAJESTY'S COMMISSIONERS, *see* App. II., p. 3.

## GENERAL RULES AND REGULATIONS.

A.—Her Majesty's Commissioners for the Exhibition of 1851 announce that the first of a series of Annual International Exhibitions of selected Works of Fine and Industrial Art and Scientific Inventions will be opened at South Kensington, London, on Monday the 1st May 1871, and closed on Saturday the 30th September 1871.

B.—The Exhibitions will take place in permanent buildings, about to be erected, adjoining the arcades of the Royal Horticultural Gardens.

C.—The productions of all nations will be admitted, subject to their obtaining the certificate of competent judges that they are of sufficient excellence to be worthy of exhibition.

D.—The first Exhibition will consist of the following classes. For each class a reporter and a separate committee will be appointed.

DIVISION I.—FINE ARTS.—Fine Arts applied or not applied to Works of Utility.

- Class 1. Painting of all kinds, in oil, water colours, distemper, wax, enamel, and on glass, porcelain, mosaics, &c.
- “ 2. Sculpture, modelling, carving and chasing in marble, stone, wood, terra-cotta, metal, ivory, glass, precious stones, and any other materials.
- “ 3. Engraving, lithography, photography, &c.
- “ 4. Architectural designs, drawings, and models.
- “ 5. Tapestries, carpets, embroideries, shawls, lace, &c., shown not as manufactures but for the Fine Art of their design in form or colour.

Class 6. Designs for all kinds of decorative manufactures.

„ 7. Copies of ancient or mediæval pictures, mosaics, enamels, reproductions in plaster, fictile ivory, electrotypes of ancient works of Art, &c.

Announcement  
in 1869 of  
1871.

**DIVISION II.—MANUFACTURES.—Manufactures, Machinery, and Raw Materials.**

Class 8. Pottery of all kinds, *viz.*, earthenware, stoneware, porcelain, parian, &c., including terra-cottas used in building ; with any new raw materials, new machinery, and processes for the preparation of such manufactures.

„ 9. Woollen and worsted fabrics, with any raw produce from new sources or prepared by any new process, and new machinery for woollen and worsted manufactures.

„ 10. Educational works and appliances.

Section *a*. School buildings, fittings, furniture, &c.

„ *b*. Books, maps, globes, instruments, &c.

„ *c*. Appliances for physical training, including toys and games.

„ *d*. Specimens and illustrations of modes of teaching Fine Art, natural history, and physical science.

„ *e*. Specimens of school work serving as examples of the results of teaching.

**DIVISION III.—SCIENTIFIC INVENTIONS AND NEW DISCOVERIES OF ALL KINDS.**

Detailed rules and lists of the separate trades engaged in the production of objects of manufacture will be issued.

**DIVISION IV.—HORTICULTURE.**

International exhibitions of new and rare plants, and of fruits, vegetables, flowers, and plants showing specialities of cultivation will be held by the Royal Horticultural Society in conjunction with the above exhibitions.

Special rules for horticultural exhibitions will be issued by the Royal Horticultural Society.

**E.**—In Divisions II. and III. producers will be permitted to send one specimen of each kind of object they manufacture, such object being distinguished by novelty or excellence.

**F.**—The arrangement of the objects will be according to classes and not, as in former international exhibitions, according to nationalities.

**G.**—One third portion of the space in each class will be assigned to such foreign exhibitors as shall obtain certificates for the admission of their objects from their respective Governments. Foreign countries will appoint their own judges. The remaining two thirds of the space will be filled with objects produced either in the United Kingdom or in foreign countries where no commission has been appointed, and sent

**Announcement in 1869 of 1871.** — direct to the building for the inspection and approval of judges appointed for the purpose. Objects not accepted for exhibition must be removed according to notices to be given, but no objects exhibited can be removed until the close of the exhibition.

**H.**—All objects must be delivered at the building, into the charge of the proper officers, unpacked and ready for immediate exhibition and free of all charges for carriage, &c.

**I.**—No rent will be charged for space, and Her Majesty's Commissioners will provide large glass cases, stands, and fittings, steam and water power, and general shafting, free of cost to the exhibitors, and, except in the case of machinery, carry out the arrangement of the objects by their own officers.

**J.**—Her Majesty's Commissioners will take the greatest possible care of all objects, but they will not hold themselves responsible for loss or damage of any kind.

**K.**—Prices may be attached to the objects, and exhibitors will be encouraged to state their prices. Agents will be appointed to attend to the interests of exhibitors.

**L.**—Every object must be accompanied by a descriptive label, stating the special reasons, such as excellence, novelty, cheapness, &c., why it is offered for exhibition.

**M.**—Due notice will be given of the days for receiving each class of objects, and to enable the arrangements to be carried into effect strict punctuality will be required in the delivery of all contributions, both foreign and British. Objects sent or brought after the days appointed for their reception cannot be admitted.

**N.**—Reports of each class of objects will be prepared immediately after the opening, and will be published before the 1st June 1871.

**O.**—Each foreign country will be free to accredit an official reporter for every class in which objects made in such country are exhibited, for the purpose of joining in the reports.

**P.**—Prizes will not be awarded, but a certificate of his having obtained the distinction of admission to the Exhibition will be given to each exhibitor.

**Q.**—A catalogue will be published in the English language, but every foreign country will be free to publish a catalogue in its own language if it think fit.

HENRY Y. D. SCOTT, LIEUT.-COL., R.E.,  
Secretary.

Office of Her Majesty's Commissioners for the Exhibition  
of 1851, Upper Kensington Gore, London, W.

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## APPENDIX IV.

ANNOUNCEMENT of the LONDON INTERNATIONAL EXHIBITION OF Announcement  
of 1872.  
1872, being the Second of the Series of Annual International Exhibitions of Selected Works of Fine Art (including Music), Industrial Art, and recent Scientific Inventions and Discoveries. Under the direction of Her Majesty's Commissioners for the Exhibition of 1851.

FOR LIST OF HER MAJESTY'S COMMISSIONERS, *see* App. II., p. 9.

GENERAL PURPOSES COMMITTEE, APPOINTED TO CARRY OUT THE SERIES OF ANNUAL INTERNATIONAL EXHIBITIONS.

The Marquis of Ripon, K.G., <i>Chairman.</i>	The Right Hon. William E. Forster, M.P.
H.R.H. the Prince Christian, K.G.	Sir Francis R. Sandford.
H.S.H. the Prince of Teck, G.C.B.	Edgar A. Bowring, Esq., C.B., M.P.
The Marquis of Lansdowne.	Henry Cole, Esq., C.B.
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The Lord Northbrook.	Dr. Lyon Playfair, C.B., M.P.
The Right Hon. Sir Stafford H. Northeote, Bart., C.B., M.P.	Colonel Henry F. Ponsonby.
The Right Hon. Henry A. Bruce, M.P.	Henry Thring, Esq.

*Clerk*, T. A. Wright, Esq.

GENERAL RULES AND REGULATIONS.

A.—Her Majesty's Commissioners for the Exhibition of 1851 announce that the Second of the series of Annual International Exhibitions of selected works of Fine Art (including Music), Industrial Art, and Recent Scientific Inventions and Discoveries, will be opened at South Kensington, London, on Wednesday, the 1st May 1872, and closed on Monday, the 30th September 1872.

B.—These Exhibitions will take place in the permanent buildings erected for the purpose, adjoining the Royal Horticultural Gardens, and in the Royal Albert Hall.

Each Annual Exhibition will consist of three Divisions:—

DIVISION I.—FINE ARTS.

„ II.—MANUFACTURES.

„ III.—RECENT SCIENTIFIC INVENTIONS AND NEW DISCOVERIES.

Divisions I. and III. will form part of each Annual Exhibition. The Classes of Manufactures included in Division II. will vary from year to year.

C.—The productions of all nations will be admitted, subject to their approval by competent judges as being of sufficient excellence to be

Announcement worthy of exhibition, and provided they have not been exhibited in the of 1872. previous International Exhibition.

D.—The Exhibition for 1872 will consist of the following classes. For each class a separate Committee of Selection will be appointed.

**DIVISION I.—FINE ARTS.** Fine Arts applied or not applied to works of utility executed since 1862.

Class 1. Painting of all kinds, in oil, water colours, distemper, wax, enamel, and on glass, porcelain, mosaics, etc.

„ 2. Sculpture, modelling, carving and chasing in marble, stone, wood, terra-cotta, metal, ivory, glass, precious stones, and any other materials.

„ 3. Engraving; lithography; photography, as a Fine Art, executed in the preceding twelve months.

„ 4. Architectural designs and drawings, photographs of executed buildings, studies or restorations of existing buildings, and models.

„ 5. Tapestries, carpets, embroideries, shawls, lace, &c., shown not as manufactures, but for the Fine Art of their design in form or colour.

„ 6. Designs for all kinds of decorative manufactures.

„ 7. Reproductions, *i.e.*, exact copies of ancient or mediæval pictures painted before A.D. 1550. Reproductions of mosaics and enamels; copies in plaster and fictile ivory. Electrotypes of ancient works of Art, &c.

**DIVISION II.—MANUFACTURES.**

Class 8. Cotton and cotton fabrics.

„ 9. Jewellery, *i.e.*, articles worn as personal ornaments made of precious metals, precious stones, or their imitations, but not goldsmiths' and silversmiths' work, which will be exhibited in 1876, or watches, which will be exhibited in 1875.

„ 10. Musical instruments of all kinds.

„ 11. Acoustic apparatus and experiments.

„ 12. Paper, stationery, and printing:—

    a. Paper, card, and millboard.

    b. Stationery, account books, &c.

    c. Letterpress, plate, and all other modes of printing.

Raw materials, machinery, and processes used in the production of all the several classes of manufactures mentioned above.

Detailed rules and lists of the separate trades engaged in the production of objects of manufacture will be issued.

**DIVISION III.—RECENT SCIENTIFIC INVENTIONS AND NEW DISCOVERIES OF ALL KINDS.**

E.—All objects submitted for this Exhibition must have been produced since 1862.

F.—In the divisions of Manufactures and Recent Scientific Inventions Announcement of 1872.  
and Discoveries producers can send only one specimen of each kind of object they produce, such objects being distinguished by novelty or excellence.

G.—The arrangement of the objects will be strictly according to classes, and not as in former International Exhibitions, according to nationalities.

H.—Foreign Governments which desire to have space guaranteed for special and selected objects can obtain such a guarantee upon making application before the 1st October 1871. (See Special Rules.)

I.—Objects produced in the United Kingdom, as well as those objects produced in foreign countries, for which space has not been guaranteed, must be sent direct to the building for the inspection and approval of judges appointed for the purpose. All objects must be delivered at the proper places in the building, which will be hereafter advertised, and into the care of the appointed officers, free of all charges for carriage, &c., unpacked, labelled, and ready for immediate exhibition.

J.—No rent will be charged for space. Her Majesty's Commissioners will provide glass cases, stands, and fittings, steam and water power, and general shafting, free of cost to the exhibitors, if their requirements in these respects be notified to Her Majesty's Commissioners before the 1st of January 1872, and the Commissioners will carry out the arrangement of the objects by their own officers, except in regard to machinery, and to any special cases requiring skilled assistance, which must be provided by the exhibitor.

K.—Her Majesty's Commissioners will take the greatest possible care of all objects, but they will not hold themselves responsible for loss or damage of any kind.

L.—Prices should be attached to all works of Art, and retail prices to all other objects intended for sale at the close of the Exhibition. Agents will be appointed to attend to the interests of exhibitors.

M.—Every object belonging to Divisions II. and III. must be accompanied by a label, stating the name and address of the exhibitor, the special reasons, such as excellence, novelty, cheapness, &c., why it is offered for exhibition, and the retail price at which the public can obtain it.

N.—The days appointed for receiving each class of objects are as follows:—

On Friday,	1	March, Machinery and raw materials.
„ Saturday,	2	„ Recent scientific inventions and discoveries.
„ Monday,	4	„ Cotton.
„ Tuesday,	5	„ Acoustic apparatus.
„ Wednesday,	6	„ Paper, stationery, and printing.

Announcement of 1872.	On Thursday,	7	March, Painting in oil and in water colours.
	„ Friday,	8	„ „ „
	„ Saturday,	9	Reproductions of pictures, mosaics, enamels, &c.
	„ Monday,	11	Architectural designs, drawings, and models.
	„ Tuesday,	12	Tapestries, carpets, embroideries, &c.
	„ Wednesday,	13	Engravings, lithography, photography, as Fine Arts.
	„ Thursday,	14	Designs for all kinds of decorative manufactures.
	„ Friday,	15	Furniture and all decorative works.
	„ Monday,	18	Stained glass.
	„ Monday,	25	Musical instruments.
	„ Wednesday,	27	Sculpture.
	„ Thursday,	4 April,	Jewellery, which must be brought in small cases to be previously obtained from the Commissioners.

To enable the arrangements to be carried into effect, strict punctuality will be required in the delivery of all objects, both foreign and British. Objects presented after the days appointed for their reception cannot be admitted.

O.—Objects not accepted for exhibition must be removed according to the notices which will be given. Objects exhibited cannot be removed until the close of the Exhibition.

P.—Reports of each class of objects will be prepared and printed immediately after the opening, and will be published as soon as possible after the 1st June 1872. Each foreign country may adopt and publish the reports in its own language, and, if desired, the expression of its agreement or disagreement with the reports may be inserted in the English reports.

Q.—Prizes will not be awarded, but a certificate of his having obtained the distinction of admission to the Exhibition will be given to each exhibitor.

R.—A catalogue will be published in the English language, but every foreign country will be free to publish a catalogue in its own language if it thinks fit.

S.—The present rules apply to the Exhibition of 1872, and are subject to revision. All persons contributing to these Exhibitions shall be considered thereby to render themselves subject to such rules and regulations as Her Majesty's Commissioners may, from time to time, lay down for the conduct of these Exhibitions.

#### MUSICAL ARRANGEMENTS.

Her Majesty's Commissioners will appoint a committee to select for

performance in the Royal Albert Hall new compositions of merit which Announcement of 1872. may have been published before the 1st March 1872.

#### SUPPLEMENTARY COURTS.

Foreign Governments may erect, subject to the regulations laid down by Her Majesty's Commissioners, buildings supplementary to those assigned to the Exhibition proper, in order to give additional space to the exhibitors selected for admission into the Annual International Exhibitions. Her Majesty's Commissioners will also provide supplementary buildings for British exhibitors. It is a condition of admission to these buildings that they are only to be used for the display of objects corresponding with those prescribed for each particular year.

HENRY Y. D. SCOTT, Major-General,  
Secretary.

Office of Her Majesty's Commissioners for the Exhibition of 1851,  
Upper Kensington Gore, London, W.

#### HORTICULTURAL EXHIBITIONS.

International Exhibitions of new and rare plants, and of fruits, vegetables, flowers, and plants showing specialities of cultivation, will be held at the same time as the above Exhibition, and special rules for them will be issued by the Royal Horticultural Society.

August 1872. No. 1.

ANNOUNCEMENT of the THIRD LONDON INTERNATIONAL EXHIBITION of 1873, being the Third of the Series of Annual International Exhibitions of Selected Works of Fine Art (including Music), Industrial Art, and Recent Scientific Inventions and Discoveries, under the direction of Her Majesty's Commissioners for the Exhibition of 1851. Announcement of 1873.

FOR LIST OF HER MAJESTY'S COMMISSIONERS, *see* App. II., pp. 3, 9, 13.

GENERAL PURPOSES COMMITTEE, appointed to carry out the SERIES of ANNUAL INTERNATIONAL EXHIBITIONS, as in 1872.

For Members, *see* App. II., p. 9.

#### GENERAL RULES AND REGULATIONS

\*A.—Her Majesty's Commissioners for the Exhibition of 1851 announce that the third of the series of Annual International Exhibitions of selected works of Fine Art (including Music), Industrial Art, and

**Announcement of 1873.** Recent Scientific Inventions and Discoveries, will be opened at South Kensington, London, in April 1873, and closed in October 1873. The precise dates will be duly announced.

B.—The Exhibition will take place in the permanent buildings erected for the purpose, adjoining the Royal Horticultural Gardens.

It will consist of three divisions :—

**DIVISION I.—FINE ARTS.**

„ **II.—MANUFACTURES.**

„ **III.—RECENT SCIENTIFIC INVENTIONS AND NEW DISCOVERIES OF ALL KINDS.**

C.—The productions of all nations will be admitted, subject to the decision of competent judges as to their being worthy of exhibition, and provided they have not been exhibited in the previous International Exhibitions of this series.

D.—The three divisions of this Exhibition will be subdivided into the following classes. For each class a separate Committee of Selection will be appointed.

**DIVISION I.—FINE ARTS.** Fine Arts applied or not applied to works of utility executed since 1863.

Class 1. Painting of all kinds, in oil, water colours, distemper, wax, enamel, and on glass, porcelain, &c. Mosaics, drawings of all kinds.

„ 2. Sculpture, modelling, carving and chasing in marble, stone, wood, terra-cotta, metal, ivory, glass, precious stones, and any other materials.

„ 3. Engraving, lithography, photography as a Fine Art, executed in the preceding twelve months.

„ 4. Architectural designs and drawings, photographs of completed buildings, studies or restorations of existing buildings, and models.

„ 5. Tapestries, carpets, embroideries, shawls, lace, &c., shown not as manufactures, but for the Fine Art of their design in form or colour.

„ 6. Designs for all kinds of decorative manufactures.

„ 7. Reproductions, *i.e.*, exact full size copies of ancient or mediæval pictures painted before A.D. 1550. Reproductions of mosaics and enamels; copies in plaster and fictile ivory. Electrotypes of ancient works of Art, &c.

**DIVISION II.—MANUFACTURES.** Machinery, substances, and processes.

Class 8. Silk and velvet fabrics.

„ 9. Steel :—

*a.* Steel manufactures, other than cutlery and edge tools.

*b.* Cutlery and edge tools.

Class 10. Surgical instruments and appliances.

„ 11. Carriages not connected with rail or tram roads.

„ 12. Substances used as food :—

- a. Agricultural products and manurial substances used in cultivation.
- b. Grocery, drysaltery, and preparations of food.
- c. Wine, spirits, beer, and other drinks, and tobacco.
- d. Implements of all kinds for drinking exhibited for peculiarity of shape or for novelty, and for the use of tobacco.

„ 13. Cooking, and its science.

Announcement  
of 1873.

DIVISION III.—CLASS 14.—RECENT SCIENTIFIC INVENTIONS AND NEW DISCOVERIES OF ALL KINDS.

E.—All industrial objects submitted for exhibition must be new. With the view, however, of increasing the educational value of the Exhibition, Her Majesty's Commissioners will, wherever possible, set aside certain spaces for collections of ancient works in the industrial division.

F.—The arrangement of objects will be strictly according to classes.

G.—Foreign Governments which desire to have space guaranteed to them can obtain such guarantee upon making application before the 1st January 1873. Such guaranteed space will not, however, be reserved for any foreign objects which are not delivered at the time appointed by Her Majesty's Commissioners.

H.—Objects produced in the United Kingdom, as well as those objects produced in foreign countries, for which space has not been guaranteed must be sent direct to the building for the inspection and approval of judges appointed for the purpose. All objects must be delivered at the proper places in the building, which will be hereafter advertised, and into the care of the appointed officers, free of all charges for carriage, &c. unpacked, labelled, and ready for immediate exhibition.

I.—No rent will be charged for space. Her Majesty's Commissioners will provide glass cases, stands, and fittings, steam and water power, and general shafting, free of cost to the exhibitors, if their requirements in these respects be notified to Her Majesty's Commissioners before the 31st of January 1873, and the Commissioners will carry out the arrangement of the objects by their own officers, except in regard to machinery, and other articles requiring skilled assistance and special fittings, which must be provided by the exhibitor.

J.—Her Majesty's Commissioners will take the greatest possible care of all objects, but they will not hold themselves responsible for loss or damage of any kind.

K.—Prices should be attached to all works of Art, and (whenever possible) to all other objects intended for sale at the close of the Exhi-

Announcement bition. Price clerks will be appointed to register the selection of objects of 1873. for purchase, and to introduce the seller to the buyer.

L.—Every object belonging to Divisions II. and III. must be accompanied by a label, stating the name and address of the exhibitor, the special reasons, such as excellence, novelty, cheapness, &c., why it is offered for exhibition, and (whenever possible) the retail price at which the public can obtain it.

M.—The latest days appointed for receiving each class of objects are as follows:—

On Saturday,	1st March,	paintings in oil and water colours.
„ Monday,	3rd „	„ „ „
„ Tuesday,	4th „	Sculpture.
„ Wednesday,	5th „	„ „ „
„ Thursday,	6th „	Fine Art furniture and all decorative works—stained glass—reproductions—substances used as food.
„ Friday,	7th „	Fine Art furniture and all decorative works—architectural designs—substances used as food.
„ Saturday,	8th „	Engravings, &c.—tapestries, &c.—cooking, and its science.
„ Monday,	10th „	Steel, cutlery, and edge tools—cooking, and its science.
„ Tuesday,	11th „	Surgical instruments and appliances—machinery and raw materials—scientific inventions.
„ Wednesday,	12th „	Designs for decorative manufactures—machinery and raw materials—scientific inventions.
„ Wednesday,	19th „	Silk and velvet.
„ Monday,	7th April,	Carriages.

That the necessary arrangements for meetings of the Committees of Selection may be carried into effect, strict punctuality will be required in the delivery of all objects, both foreign and British.

N.—Objects not accepted for exhibition must be removed according to notices which will be hereafter given.

O.—Objects exhibited cannot be removed until the close of the Exhibition, except under the orders of Her Majesty's Commissioners.

P.—Prizes will not be awarded, but a medal will be given to each exhibitor certifying that he has obtained the distinction of admission to the Exhibition.

Q.—A catalogue will be published in the English language, but every foreign country will be free to publish a catalogue in its own language.

R.—Tickets of admission will be issued to each exhibitor or firm exhibiting, after the opening of the Exhibition. Announcement of 1873.

S.—The above rules apply to the Exhibition of 1873. All persons contributing to that Exhibition shall be considered thereby to render themselves subject to the present rules, and to such other rules and regulations as Her Majesty's Commissioners may, from time to time, lay down.

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## APPENDIX V.

(30th May 1871.)

ARRANGEMENTS for EXHIBITING MANUFACTURES in each of the NINE EXHIBITIONS to follow the present one of 1871.

Arrangements for the Nine Years Exhibitions after 1871.

1872.

Cotton and all its uses.

Jewellery, *i.e.*, objects worn as personal ornaments made of precious metals, precious stones, or their imitations, but not gold and silver-smiths' work for general use, which will be exhibited in 1876, or watches, which will be exhibited in 1875.

Musical instruments of all kinds.

Acoustical apparatus and experiments.

Paper, stationery, and printing.

*a.* Paper, card, and millboard.

*b.* Stationery, account books, &c.

*c.* Letterpress, plate, and all other modes of printing.

New raw materials, machinery and processes used in the production of all the several classes of manufactures mentioned above.

*Any Modifications in the year 1873 or the following Years will be duly announced.*

1873.

Silk and velvet.

Steel, cutlery, and edge tools.

*a.* Steel manufactures.

*b.* Cutlery and edge tools.

Surgical instruments and appliances.

Carriages not connected with rail or tram roads.

Arrangements  
for the Nine  
Years Exhibi-  
tions after  
1871.

Substances used as food.

- a. Agricultural products.
- b. Drysaltery, grocery, preparations of food.
- c. Wine, spirits, beer and other drinks, and tobacco.
- d. Implements for drinking, and the use of tobacco of all kinds.

Cooking and its science.

Machinery for the group.

Raw materials for all the above-mentioned objects.

#### 1874.

Lace, hand and machine made.

Civil engineering, architectural, and building contrivances and tests.

- a. Civil engineering, and building construction.
- b. Sanitary apparatus and constructions.
- c. Cement and plaster work, &c.

Leather, including saddlery and harness.

- a. Leather, and manufactures of leather.
- b. Saddlery, harness.

Artificial illumination by all methods, gas and its manufacture.

Bookbinding of all kinds.

Machinery in general for the group.

Raw materials used for all the above-mentioned objects.

#### 1875.

Woven, spun, felted, and laid fabrics (when shown as specimens of printing or dyeing).

Horological instruments of all kinds.

Brass and copper manufactures.

Hydraulics and experiments. Supply of water.

Machinery in general for the group.

Raw materials used for all the above-mentioned objects.

#### 1876.

Works in precious metals and their imitations.

Photographic apparatus and photography.

Skins, furs, feathers, and hair.

Agricultural machinery and results.

Philosophical instruments, and processes depending upon their use.

Uses of electricity.

Machinery in general for the group.

Raw materials used for all the above-mentioned objects.

## 1877.

Arrangements  
for the Nine  
Years Exhibi-  
tions after  
1871.

Furniture and upholstery, including paper-hangings and papier mâché.

*a.* Furniture and upholstery.

*b.* Paper hangings and general decoration.

Health, manufactures, &c., promoting, with experiments.

Machinery in general for the group.

Raw materials used for all the above-mentioned objects.

## 1878.

Tapestry, embroidery and needlework.

Glass.

*a.* Stained glass used in buildings.

*b.* Glass for household purposes.

Military engineering, armour and accoutrements, ambulances, ordnance and small arms.

*a.* Clothing and accoutrements.

*b.* Tents, camp equipages, and military engineering.

*c.* Arms, ordnance, and ammunition.

Naval architecture—ships' tackle.

*a.* Ships for purposes of war and commerce.

*b.* Boats, barges, and vessels for commerce, amusement, &c.

*c.* Ships' tackle and rigging.

Additional.

*d.* Clothing for the navy.

Heating and combustion, with experiments.

Machinery in general for the group.

Raw materials used for all the above-mentioned objects.

## 1879.

Matting of all kinds, straw manufactures.

Flax and hemp.

Iron and general hardware.

*a.* Iron manufactures.

*b.* Tin, lead, zinc, pewter, and general brazing.

Dressing cases, travelling cases, &c.

Horticultural machinery and products.

Uses of magnetism.

Machinery in general for the group.

Raw materials used for all the above-mentioned objects.

Arrangements  
for the Nine  
Years Exhibi-  
tions after  
1871.

1880.

Chemical substances and products, and experiments, pharmaceutical processes.

a. Chemical products.

b. Medical and pharmaceutical products and processes.

c. Oils, fats, wax.

Articles of clothing.

a. Hats and caps.

b. Bonnets and general millinery.

c. Hosiery, gloves, and clothing in general.

d. Boots and shoes.

Railway plant, including locomotive engines and carriages.

Machinery in general for the group.

Raw materials used for all the above-mentioned objects.

## APPENDIX VI.

GENERAL REGULATIONS for the ANNUAL INTERNATIONAL  
EXHIBITIONS, issued in 1873.

Objects of  
Exhibitions.

London Annual  
Exhibitions  
under the  
Royal Com-  
mission for  
Exhibition of  
1851.

Objects of the  
Annual Exhi-  
bitions.

Alliance of  
fine art and  
industry.

## THE OBJECTS OF THE EXHIBITIONS.

1. The London Annual International Exhibitions are conducted by the Royal Commissioners for the Exhibition of 1851, who are trustees of the funds arising from the profits of the First International Exhibition in 1851, to be devoted to the promotion of science and art bearing on productive industry.

2. It is intended that these Exhibitions shall furnish the opportunity of decennially reviewing the progress, throughout the world, of fine arts, and of every branch of industrial manufacture, with the view of stimulating the application of the principles of science and art to productive industry.

3. In modern times beauty or fine art has, sometimes, been too much dissociated from purposes of utility; but, in the ancient and mediaeval periods, high art was often brought into alliance with the commonest materials of manufacture. Thus, the Etruscans painted on vessels of clay subjects which still charm us by their beauty of composition and skilful drawing; the furniture and implements recovered from Pompeii are as remarkable for their artistic form as for their ingenious design;

and the celebrated cartoons of Raffaelle were merely designs for the decoration of woollen hangings.

General Regulations issued in 1873.

4. Hence, in the London International Exhibitions, the Fine Art Division, No. I., will recur annually, so that encouragement may be given to progress in the application of art to manufactures, and to objects of every-day use. Illustrations of musical art will also be given. Division II. will consist of three or four of the chief classes of manufactures, so selected that all the industrial arts shall be brought under review once in the series of ten years. The respective raw materials and machinery employed in such manufactures will also be exhibited. Division III. will include scientific inventions and new discoveries, of such importance that their introduction to the public should not be delayed till the proper year for their exhibition in Division II. The objects admitted to the current series of London International Exhibitions are therefore classified as follows:—

Objects admitted are exhibited in three divisions.

DIVISION I.—FINE ARTS.

- „ II.—MANUFACTURES, WITH THE RAW MATERIALS, MACHINERY, AND PROCESSES EMPLOYED.
- „ III.—RECENT SCIENTIFIC INVENTIONS AND NEW DISCOVERIES.

5. The London Annual International Exhibitions are held in permanent buildings, erected for the purpose, at South Kensington, adjoining the Royal Horticultural Society's gardens, and in the galleries of the Royal Albert Hall.

6. The productions of all nations will be admitted, subject to the decision of competent judges as to their being worthy of exhibition, and provided that they have not been exhibited in previous International Exhibitions of this series.

Objects exhibited must be approved by Committees of Selection.

7. Applications to submit objects proposed for exhibition to the official "Committees of Selection" should be made on the Form of Preliminary Application (No. 10), which can be obtained at the offices, 5, Upper Kensington Gore, London, S.W., and should be forwarded to the Secretary before the 1st January of the year in which the Exhibition will be held.

Application to submit objects for exhibition.

8. Foreign governments desiring to have space guaranteed to them can obtain such guarantee upon making application (see par. 59, p. 50) before the 1st January of the year in which the Exhibition is to be held. Such guaranteed space cannot, however, be reserved for any foreign objects which are not delivered at the time appointed by Her Majesty's Commissioners. Objects forwarded by a foreign government to fill any such guaranteed space will not (if they come within the scope of the Exhibition) be submitted to the Committees of Selection, but will be exhi-

Space guaranteed to foreign governments.

General Regulations issued in 1873.

Objects to be approved by Committees of Selection.

Goods must be delivered punctually.

Carriage must be prepaid.

No rent for space, and cases, &c. are provided for exhibitors.

Woodwork of cases to be black.

Objects generally will be arranged for exhibitors.

Arrangement of objects.

Changes will be made if desirable.

bited on the responsibility of the government sending them. Her Majesty's Commissioners reserve to themselves the right of admitting to the Exhibition, through the Committees of Selection, any object coming from a foreign country, whether such country has had space guaranteed to it or not.

9. Objects produced in the United Kingdom or in the Colonies, as well as objects produced in those foreign countries for which space has not been guaranteed, must be sent direct to the building for the inspection and approval of the Committees of Selection. All objects must be delivered on the appointed days, at the proper entrances to the building (which will be duly advertised), and into the care of the appointed officers, free of all charges for carriage, &c., unpacked, labelled, and ready for immediate exhibition.

10. In order that the necessary arrangements for meetings of the Committees of Selection may be carried into effect, strict punctuality will be required in the delivery of all objects, whether foreign or British.

11. The Commissioners cannot undertake to receive any package which may be presented by carriers with charges unpaid. Foreign artists whose works are not sent through a foreign government should consign their works to an agent in London. Messrs. Chaplin and Horne, Swan with Two Necks, Gresham Street, London, will convey packages from vessels to the Exhibition at fixed rates, and are recommended as the London agents for exhibitors.

12. No rent will be charged for space; and Her Majesty's Commissioners will provide glass cases, railings, and shafting for machinery in motion, free of cost to the exhibitors, should the exhibitors desire it; but their requirements in these respects must be notified to the Commissioners before the 1st January of the year in which the Exhibition is to be held. (See Form No. 10<sup>a</sup>.)

13. In the case of exhibitors supplying their own glass cases, all the woodwork of frames should be black and polished, and the designs approved by Her Majesty's Commissioners.

14. Her Majesty's Commissioners will carry out the arrangement of the objects by their own officers, unless the exhibitors make special application to be allowed to do so. The arrangement of machinery and other articles requiring skilled assistance and special fittings must be undertaken by the exhibitor.

15. The arrangement of objects will, as far as possible, be according to classes, and not nationalities.

16. Her Majesty's Commissioners reserve to themselves the power of determining all questions relating to the position and arrangement of all objects in all the classes, as well as those relating to such changes as may from time to time be found desirable.

17. Every object sent for exhibition should be accompanied by a label, stating the name and address of the exhibitor, and if several works are sent a numbered list of the works submitted for approval must be sent in with them, each work bearing a label and a number corresponding with this list. To each work should also be securely attached a label bearing the title and the name and address of the artist and owner: particular accuracy is requested in this respect.

General Regulations issued in 1873.

Labels.

18. Prices should be attached, whenever possible, to all objects intended for sale at the close of the Exhibition. Price clerks will be appointed to register the selection of objects for purchase, and to introduce the seller to the buyer.\*

Prices should be attached.

Price clerks.

19. Objects not accepted for exhibition must be removed from the building in compliance with the notices which will be given after the decisions of the Committees of Selection have been notified to Her Majesty's Commissioners.

Rejected goods to be removed by owners.

20. Objects exhibited cannot be removed until the close of the Exhibition, except under the orders of Her Majesty's Commissioners.

Accepted goods must remain during the Exhibition.

21. No prizes will be awarded; but a medal will be given to each Exhibitor, as a certificate that he has obtained the distinction of admission to the Exhibition.

Medals for exhibitors.

22. An official catalogue will be published in the English language, Catalogue. but every foreign country will be at liberty to publish a catalogue in its own language.

23. Her Majesty's Commissioners will take the greatest possible care of all objects sent for exhibition, but they will not hold themselves responsible for loss or damage of any kind.

The Commissioners not responsible for damage to objects exhibited. Free admission tickets for exhibitors.

24. Tickets of admission, available during the Exhibition, will be

\* To afford the public facilities for obtaining objects at the close of the Exhibition, clerks will be employed in various parts of the building to register exhibits selected for purchase. They will be at their desks daily, and will assist intending purchasers under the subjoined rules framed in accordance with the practice followed at the Royal Academy Exhibitions.

- a. The price clerk will register the exhibits selected by intending purchasers.
- b. Any object or picture not priced by the exhibitor will be regarded by the price clerk as "not for sale," unless special instructions are given by the owner.
- c. An intending purchaser will sign his name and enter his address on a form, which will be retained as a voucher for marking the object or picture as selected for purchase.
- d. The price clerk will then communicate with the owner of the exhibit, and will enter it as selected for purchase.
- e. No article can be removed from the Exhibition until its close.
- f. All copies or duplicates must be obtained out of the Exhibition, and for them the price clerk will not take orders; such applications should be made direct to the exhibitor.
- g. Articles selected for purchase will be removed by the exhibitor, with whom all monetary transactions must be conducted.
- h. For the convenience of intending purchasers, the prices of objects will be inserted in the catalogue, when they are furnished by the exhibitors. Every endeavour will be used to ensure correctness, but Her Majesty's Commissioners will hold themselves in no way responsible for loss which may be incurred through error in such entries.

General Regulations issued in 1873.

Exhibitors considered to bind themselves to these rules, as condition of admission.

Fine arts.

Paintings and sculpture.

Privileges of societies.

given, on application, after the opening of the Exhibition, to each exhibitor, or firm exhibiting.

25. All exhibitors in the London International Exhibitions, by the fact of exhibiting, render themselves subject to the present rules, and to such other rules and regulations as Her Majesty's Commissioners may from time to time lay down.

#### REGULATIONS FOR CLASSES OF FINE ART.—DIVISION I.

26. Examples of fine art (either applied or not applied to works of utility) will form part of each Exhibition of the series, and will be arranged under Division I., in the following classes:—

- Class 1. Painting of all kinds, in oil, water colours, distemper, wax, enamel, and on glass, porcelain, &c. Mosaics; drawings of all kinds.
- „ 2. Sculpture, modelling, carving and chasing in marble, stone, wood, terra-cotta, metal, ivory, glass, precious stones, and any other materials.
- „ 3. Engraving; lithography; photography, as a fine art, executed in the preceding twelve months.
- „ 4. Architectural designs and drawings, photographs of completed buildings, studies or restorations of existing buildings, and models.
- „ 5. Tapestries, carpets, embroideries, shawls, lace, &c., shown not as manufactures, but for the fine art of their design in form or colour.
- „ 6. Designs for all kinds of decorative manufactures.
- „ 7. Reproductions, *i.e.*, exact full size copies of ancient or mediæval pictures painted before A.D. 1556. Reproductions of mosaics and enamels; copies in plaster and fritile ivory; electrotypes of ancient works of art, &c. Such works may be ancient or modern, according to the special regulations issued for each year.

27. As respects modern works, an artist himself must not submit more than three works of each kind for exhibition, but he may submit works of as many different kinds as he pleases: thus the same artist may send for admission three oil paintings, three water-colour paintings, three paintings on enamel, porcelain, &c.; also three sculptures in marble, three in wood, &c.

28. Works by British or foreign artists, who are members of academies, such as the Royal Academy of London, the Institute of British Artists, the two Water Colour Societies, the Royal Scottish Academy, and the French, German, Italian, Belgian, or other foreign academies, and well-established societies of artists, will be secured admission if application be

made and particulars of the works given by the respective societies General Regulations issued before 1st January 1874. in 1873.

29. The pictures may have been already publicly exhibited in other places than the Annual International Exhibitions, and may have been painted at any period of the career of the artist. What pictures are admissible.

30. Merit being equal in the case of paintings, preference in the selection will be given to pictures which have been already exhibited by societies named in paragraph 28; also to those paintings which are of a decorative character, and are designed for a special decorative purpose. Preference given to pictures mentioned in par. 28.

31. Collections of the works of deceased eminent British artists will be made every year by Her Majesty's Commissioners, to illustrate their career. Deceased British artists.

31a. The admission of works sent direct by artists will be regulated by the space available either in the east and west galleries, or in the galleries of the Royal Albert Hall. Her Majesty's Commissioners reserve to themselves the absolute right of arranging all such works where they see fit. Admission and arrangement of works regulated by space available.

32. In the case of any distinguished artist recently deceased, a selection of his works may be exhibited as a group. Recently deceased artists.

33. Works by officers of the army and navy will be collected by a committee, and exhibited separately.\* Army and navy.

34. Sketches made by artists in furtherance of their works, also the sketches of amateurs illustrating their travels, are eligible for admission.†

35. Collectors who may desire to exhibit their collections of fine arts together may have space allotted upon making application before January 1st in each year.‡

\* The officers of the army and navy have special opportunities of producing illustrations of scenery, buildings, and native customs in all parts of the world, as well as representations of scientific warfare. The following is the committee for this purpose:—

Captain H.R.H. the Duke of Edinburgh, K.G., R.N.

Field Marshal H.R.H. the Duke of Cambridge, K.G.

Captain H.S.H. Count Gleichen, R.N.

Brigadier-Gen. Sir J. M. Adye, K.C.B., R.A.

Major-General H. R. Benson, C.B., late 17th Lancers.

Colonel R. Biddulph, R.A.

Dr. F. Blake, R.N.

Col. Hon. H. H. Clifford, C.B., V.C.

Colonel Hon. W. J. Colville.

Lieut.-Col. Sir J. C. Cowell, C.B., R.E.

Colonel H. Crealock, C.B.

Vice-Admiral Hon. J. R. Drummond, C.B., R.N.

Colonel Alexander Elliot.

Colonel A. E. Ellis.

Lieut.-Col. Sir H. Elphinstone, K.C.B., C.M.G., V.C., R.E.

Rear-Admiral Ewart, C.B., R.N.

Colonel T. Gallwey, R.E.

Captain R. C. Goff, Coldstream Guards.

Rear-Admiral E. A. Inglefield, C.B., R.N.

Lieut.-Colonel R. Drury Lowe.

Rear-Admiral Oliver, R.N.

Major J. F. D. Donnelly, R.E., Hon. Sec. of the Committee.

† In 1873, Mr. Taylor lent 50 paintings by himself illustrating Indian life and scenery, which were displayed as a series in the Indian Court.

‡ His Royal Highness the Duc de Nemours also obligingly aided in supplying the void in the representation of French art occasioned by the International Exhibition at Vienna, by sending 16 pictures representing the visits of Queen Victoria and the Prince Consort to France

General Regulations issued in 1873.

Decorative fine art.

Architecture.

Copies of ancient and mediæval works of art.  
Certificated foreign works.

Frames.

Heavy objects of fine art.

36. Paintings and sculptures may either be works complete in themselves, or may form part of the decoration of objects of utility, *e.g.*, vases in pottery, fans, panels for furniture, wood-carving for furniture, &c., provided that such objects are entitled to be classed as works of fine art.

37. The buildings to which architectural drawings, &c., relate must have been designed, commenced, or finished within ten years preceding that in which the Exhibition is held. Architectural drawings and designs which have gained the travelling studentship of the Royal Academy, the gold medal of the Royal Academy, or the Soane medallion of the Royal Institute of British Architects, within the preceding five years, will be considered admissible without other question than that of sufficiency of space. Each architectural work should bear the name of the architect who designed, as well as that of the artist who painted it. Architectural models should be submitted when possible. Drawings of plans, which can be admitted only as explanations of the general design, should be on as small a scale as possible.

38. A producer will be permitted to submit for selection reproductions of any number of ancient or mediæval works of art.

39. Foreign works of fine art may be sent with the certificate of admission given by the respective governments, or by the academies, of the countries in which they are produced.

40. All pictures and drawings must be in gilt or other suitable frames. Drawings with wide margins are inadmissible. Excessive breadth in frames, as well as largely projecting mouldings, may prevent pictures being admitted or obtaining the situation which they merit; and oval frames should be avoided, as they are difficult to arrange. Each picture or drawing must be in a separate frame, but a series of drawings relating to one subject, very small miniatures, or sculptured gems, placed in a frame not exceeding the imperial size, will be admitted as one work.

41. To prevent unnecessary trouble and expense to artists who may wish to exhibit heavy objects, such as sculpture, decorative furniture, architectural models, and bulky reproductions, photographs or sketches of the works proposed for exhibition, with specification of height, and dimensions of the base, should be sent to the Secretary on or before the 1st January of the year in which the Exhibition is held, so that a decision may be come to as to the possibility of their admission.

in 1843, and of King Louis Philippe to England in 1844 (Nos. 261 to 277), and Sir R. Wallace has lent his unrivalled collection of works of Meissonnier, which are arranged together (Nos. 244 to 258).

Mr. J. Newton Mappin, of Sheffield, sent 18 interesting pictures from his collection, which are also arranged together as his contribution (Nos. 323 to 354). Sir Robert Peel contributed paintings by Mr. Simpson, illustrating incidents in the Crimea (Nos. 1,501 to 1,514); and Mr. MacCallum contributed 24 sketches from Egypt (Nos. 1,515 to 1,539).

42. To each work should also be securely attached a label bearing the title and the name and address of the artist and owner: particular accuracy is requested in this respect. The prices of works, if for sale, must be stated on the label accompanying the work; and if not for sale the work must be so marked.

General Regulations issued in 1873.

Label to be attached, with prices.

(*For days of receiving works of art, see par. 57, p. 49.*)

REGULATIONS FOR MANUFACTURES, WITH THE RAW PRODUCE,  
MACHINERY AND PROCESSES EMPLOYED.—DIVISION II.

43. In 1874, Division II. of the Exhibition will consist of the following *Manufactures*, classes (see special rules and separate notices):—

- Class 8. Lace (hand and machine made).
- „ 9. Civil engineering, architectural and building contrivances.
  - a. Civil engineering, architectural and building contrivances.
  - b. Sanitary apparatus and construction.
  - c. Cement and plaster work, &c.
- „ 10. Heating by all methods and kinds of fuel.
- „ 11. Leather, including saddlery and harness.
  - a. Leather, and manufactures of leather.
  - b. Saddlery, harness, &c.
- „ 12. Bookbinding.
- „ 13. Foreign wines, in the vaults of the Royal Albert Hall.

Under Division II. (*manufactures*) will be exhibited selected specimens of the finished manufacture, as well as the raw material of the fabric in its different stages of production, and the machinery and processes employed in its manufacture.

44. All industrial objects submitted for exhibition should be limited to such specimens as are necessary to show the manufacture and patterns in a satisfactory manner. No mere duplicates can be admitted: the same design in a fabric may, however, be shown with different combinations of colours.

Duplicates not admissible.

45. With the view of increasing the educational value of the Exhibition, by chronicling the progress of manufactures, Her Majesty's Commissioners will reserve certain spaces in the industrial division for special collections of ancient works.

Collections of ancient works of industry will be admissible.

46. In the case of industrial productions, the special reasons (such as Retail prices, excellence, novelty, cheapness, &c.) why it is exhibited should be stated, and, whenever possible, the average retail price at which it can be bought.

47. Exhibitors of machinery must construct all necessary foundations, and provide their own driving-belts and driving-pulleys, which are to be in halves, and bored to the proper diameter of the main shafting, as notified to them by Her Majesty's Commissioners. They must also

Exhibitors to provide foundations, pulleys, &c., for machinery.

General Regulations issued in 1873.

—  
Goods manufactured within the Exhibition building may be sold to visitors.

Particulars required for machinery.

Exhibitors to pay for gas or water consumed.

Recent scientific inventions.

Objects should be new.

Information to accompany

supply and erect, at their own expense, any counter-shafting (including the necessary foundations) which they may consider requisite to increase or reduce the speed to suit their own particular machines.

48. In order that exhibitors of machinery and processes may recoup the cost of the operations illustrated, they will be permitted to sell to visitors such results of the operations as are actually manufactured within the Exhibition building, on condition of the payment of a moderate royalty, based upon a head-money payment on the total number of visitors to the Exhibition.

49. The following information should be supplied, with the form of preliminary application (Form No. 10), by proposing exhibitors of machinery (Form No. 10<sup>a</sup>).

- a. A plan of each machine, showing the position of driven-pulleys, the minimum space required for attendants, and indicating the parts of the machine which should be placed most prominently for inspection by the public. An elevation would also be of use, if it could be supplied without inconvenience.
- b. A plan and section of the foundations required.
- c. The weight of the machine.
- d. The amount of motive-power, in actual horse-power, required from main shafting.
- e. Should water, steam, or gas be required, all necessary information as to the quantities of the requisite supplies, which must be paid for by the exhibitor.

50. Exhibitors must make their own connexions for gas, water, and steam. They must also provide and attach meters of sufficient capacity to measure the quantities of gas or water which they may consume, and for which they must pay monthly to Her Majesty's Commissioners, at the rates actually charged at the time by the companies.

(*The days for receiving manufactures, &c., are stated in paragraph 57.*)

#### RECENT SCIENTIFIC INVENTIONS AND NEW DISCOVERIES OF ALL KINDS. —DIVISION III.

51. Division III, recent scientific inventions and discoveries, will consist of objects, the excellence and novelty of which are considered by the Committee of Selection to be so great as to render it undesirable that their introduction to the public should be delayed until the proper year for the exhibition of their classes of manufacture in Division II.

52. No objects will be admitted into Division III, which have been shown in previous International Exhibitions of this series, unless very important alterations or improvements have been added to them since the date of their previous exhibition.

53. To assist the Committee of Selection in judging of the qualifications for admission of any invention submitted for exhibition in

Division III., it is desirable that the form of preliminary application (No. 10) should be accompanied by a statement of the inventor's special claims to novelty and excellence, and (if possible) by the written opinion of some scientific gentleman of repute who has practically examined the invention.

54. The Act of Parliament for the protection of inventions exhibited at the Annual International Exhibitions is entitled "The Protection of Inventions Act, 1870," 33 & 34 Vict. c. 27., and dated 14th July, 1870.

(*The day appointed for receiving objects in this division is 11th March 1874.*)

#### SPECIAL REGULATIONS FOR THE LONDON EXHIBITION OF 1874.

55. The fourth of the present series of Annual International Exhibitions of selected works of fine art (including music), industrial art, and recent scientific inventions, will open at South Kensington, London, on Easter Monday, the 6th April 1874, and will close on Saturday, the 31st October 1874.

56. Division II. of the 1874 Exhibition will consist of the following classes (see special rules and separate notices):—

Class 8. Lace (hand and machine made).

„ 9. Civil engineering, architectural and building contrivances.

    a. Civil engineering, architectural and building contrivances.

    b. Sanitary apparatus and constructions.

    c. Cement and plaster work, &c.

„ 10. Heating by all methods and kinds of fuel.

„ 11. Leather, including saddlery and harness.

    a. Leather, and manufactures of leather.

    b. Saddlery, harness, &c.

„ 12. Bookbinding.

„ 13. Foreign wines, in the vaults of the Royal Albert Hall.

57. The latest days appointed for receiving each class of objects are as follows:—

Tuesday, 10th February. Specimens of ancient lace.

Monday, 17th „ Class 10. Heating by all methods.

Monday, 23rd „ Paintings in oil and water colours.

Tuesday, 24th „ „ „ „

Wednesday, 25th „ Sculpture.

Thursday, 26th „ „

Friday, 27th „ Fine art furniture—decorative works—stained glass—reproductions.

Saturday, 28th „ Fine art furniture—decorative works—architectural designs.

Monday, 2nd March. Engravings—photographs—tapestries.

Tuesday, 3rd „ Designs for decorative manufactures.

Wednesday, 4th „ Machinery of all classes.

Thursday. 5th „ Class 9. Civil engineering, architectural and building contrivances.

Special Regulations of 1874.	Friday, 6th March	Class 11. Leather, saddlery and harness.
	Saturday, 7th "	12. Bookbinding.
	Wednesday, 11th "	14. Recent scientific inventions and new discoveries.
	Tuesday 17th "	8. Machine-made and modern lace.

*Foreign wines (Class 13) must be delivered punctually on the days which will be announced hereafter.*

New methods of construction may be shown in operation.

58. Exhibitors in Class 9 who may wish to show new methods of construction in actual operation, during the Exhibition, will (with the Committee's approval) be allotted space in the West Annexe, wherein to build or to erect their plant, &c., in view of the visitors to the Exhibition.

#### FOREIGN OBJECTS SENT THROUGH FOREIGN GOVERNMENTS.

Statement showing the amount of space required for objects sent direct by foreign governments.

59. In accordance with the general rule (paragraph 8) foreign governments which desire to ensure the exhibition of any of their countries' productions belonging to the classes appointed for the year must make known their intention to send objects before the 1st January 1874, and must furnish Her Majesty's Commissioners, on or before the 1st January 1874, with a statement on the Form No. 8, showing the amount and nature of the space required under the several classes and sections of each division, when Her Majesty's Commissioners will immediately consider the applications from foreign countries with a view to the equitable distribution of the space at their disposal.

Delivery of objects by foreign governments.

60. The objects must be delivered at the Exhibition buildings, free from all charges for carriage, &c., into the care of an agent, who will have them unpacked, and note the state in which the objects are found. The charges for carriage from the vessels arriving at London to the Exhibition buildings are specified in paragraph 64.

Arrangement of objects sent by foreign governments, foundations or special constructions.

61. Her Majesty's Commissioners will carry out the arrangement of all objects by their own officers. To enable them to do this for articles of great size or weight which will require foundations or special constructions, and the placing of which will entail considerable labour, foreign governments must furnish the particulars of the necessary foundations on or before the 1st January 1874; and all such objects must be delivered at the Exhibition not later than the dates specified above. Her Majesty's Commissioners will provide the foundations, but the fitting must be done by and at the expense of the exhibitor or his agent.

Punctuality necessary for foreign goods.

62. In the case of foreign governments wishing to send all their contributions at one time the dates specified in paragraph 57 may be anticipated, but in no case may they be overstepped. The experience of the Exhibitions of 1871, 1872, and 1873 has shown the imperative necessity of insisting on the punctual delivery of objects.

Arrangements for unpacking and inspection of foreign goods.

63. Her Majesty's Commissioners, with the view of reducing the expenses of foreign governments taking part in the Annual International Exhibitions, and saving them possible difficulty and inconvenience, have decided to provide, without charge to foreign governments, persons to unpack the goods, in the presence of the agent deputed on behalf of each foreign government to make a

note of the state in which the objects arrive, but it must be clearly understood that no responsibility of any kind for loss or damage attaches to Her Majesty's Commissioners. Special Regulations of 1874.

64. In reference to the subject of the carriage of foreign goods from the vessels in which they arrive to the Exhibition buildings, Her Majesty's Commissioners recommend Messrs. Chaplin and Horne, for the conveyance of foreign goods from the wharves to the Exhibition. Messrs. Chaplin and Horne will undertake to do this work at the rate of seventeen shillings and sixpence per ton, which would include lighterage, landing, clearing, and cartage to the Exhibition buildings, the same rate applying to the return carriage of the goods.

65. All charges for freight, &c., must be prepaid, so that the goods may be delivered from the vessel to Messrs. Chaplin and Horne, without any payment by them.

66. Should foreign governments be desirous of accepting the services of Bills of lading. Messrs. Chaplin and Horne, Her Majesty's Commissioners will be obliged by their directing all goods for the Annual International Exhibitions to be consigned to them, and by their taking steps to ensure that all bills of lading shall be in Messrs. Chaplin and Horne's possession before the arrival of the vessel.

67. The officers of Her Majesty's Commissioners will examine all bills, and certify to the correctness of the charges, in accordance with the terms stated above, if requested to do so by foreign governments.

68. In the event of foreign governments desiring to avail themselves of the services of Messrs. Chaplin and Horne, Her Majesty's Commissioners request that an authority may be forwarded to their Secretary as soon as possible, in the following terms :—

Bills examined by officers of Her Majesty's Commissioners.

Authority from foreign governments to employ Chaplin and Horne.

Name of country \_\_\_\_\_  
 To Messrs. Chaplin & Horne, \_\_\_\_\_  
 Swan with Two Necks, \_\_\_\_\_  
 Gresham Street, London. \_\_\_\_\_

I hereby authorise you to receive all goods sent to the London International Exhibition of 1874, and to convey them from the vessels to the Exhibition buildings, and again, at the expiration of the Exhibition, from the Exhibition buildings to the vessels, at the rate of seventeen shillings and sixpence per ton each way.

Signature \_\_\_\_\_

69. It will thus be seen that the only expense that foreign governments need incur, beyond the actual cost of carriage, will be the payment of an agent to inspect the unpacking, and to note the condition of the objects.

Form No. 5.

CIVIL ENGINEERING, ARCHITECTURAL AND BUILDING CONTRIVANCES.  
 DIVISION II., CLASS 9.

*Rules for the Preparation of Diagrams of Ancient and Modern Buildings of all Countries.*

1. The diagram should be of a bold scenic character.
2. They should be executed on canvas, and may be in oil colour or distemper.
3. They may be executed in colours or in monochrome.

Special Regu-  
lations of 1874.

4. They should be perspective views.
5. Each diagram should be at least 5 feet by 10 feet, but single diagrams ought not to occupy more than 10 feet in height and 20 feet in length.
6. Each diagram should be attached to a roller, and sent rolled.
7. The scale should be clearly marked upon each diagram.
8. Her Majesty's Commissioners would be glad to have the right of purchasing the diagrams, if for sale, at the prices attached to them.

Form No. 6.

EXHIBITION OF FOREIGN WINES IN 1874.

DIVISION II., CLASS 13.

1. Her Majesty's Commissioners have requested the following noblemen and gentlemen to act as a committee for making an exhibition of the pure wines of all countries in 1874, when the public will be enabled to taste and carry away samples :

Earl of Dunmore.	Mr. C. H. Kayser.
Viscount Powerscourt.	Mr. C. Lombard de Luc.
Lord Skelmersdale.	Mr. H. Matthiessen.
Sir Daniel Cooper, Bart.	Mr. G. Moffatt.
Colonel Charles Baring.	Mr. Joseph Prestwich.
Mr. E. L. Beckwith.	Mr. E. Apps Smith.
Mr. Gordon Clark.	Mr. Morgan Yeatman.
Mr. F. W. Cosens.	

2. The Exhibition will take place in the brick vaults of the Royal Albert Hall, which are, in all respects, perfectly suited for the purpose, and well lighted.
3. The Corporation of the Royal Albert Hall will grant the free use of the vaults for the Wine Exhibition, but the exhibitors will have to fit up, at their own cost, the spaces allotted to them.
4. Growers, shippers, and importers only are eligible to be exhibitors, the place of growth must be given in all cases, and the name of the grower, if possible.
5. Attendants of exhibitors will be allowed, under regulations.
6. The Exhibition will open on Easter Monday, the 6th April 1874.
7. Growers, shippers, and importers, who desire to have space allotted to them, must fill up the accompanying form.
8. The wines must be delivered punctually on the days which will be announced hereafter.

LONDON INTERNATIONAL EXHIBITION OF 1874.

FOREIGN WINES.

<sup>1</sup> Here insert  
name and  
address.

I or we,<sup>1</sup> \_\_\_\_\_  
of \_\_\_\_\_

<sup>2</sup> Here state  
whether grower, <sup>2</sup>  
shipper, or  
importer.

of<sup>3</sup> \_\_\_\_\_

<sup>3</sup> Insert name of  
wine.

wine,

<sup>4</sup> State where  
grown.

produced in<sup>4</sup> \_\_\_\_\_

Special Regu-  
lations of 1874.

hereby make application for space to exhibit<sup>5</sup>

<sup>5</sup> Here state  
number, size,  
marks, and  
quantity,  
whether in  
casks, cases,  
or bottles, and  
any other par-  
ticulars.

<sup>6</sup> Space in feet.

in 1874, and request to have<sup>6</sup> superficial feet of  
floor space allotted to me, which I am willing to fit up and occupy according to  
the rules which may be laid down.

Signature \_\_\_\_\_  
 and Address \_\_\_\_\_  
 of intending \_\_\_\_\_  
 Exhibitor \_\_\_\_\_

NOTE.—This application should be delivered to the Secretary for the International Exhibitions of 1874, No. 5, Upper Kensington Gore, at latest, on the 15th day of November 1873, and as much earlier as convenient.

Form No. 10.

FORM OF PRELIMINARY APPLICATION.

Persons desirous of taking part in the International Exhibition of 1874 are requested to fill up this form, and to forward it as soon as possible, but not later than the 1st of January 1874, to Major-General Scott, C.B., Secretary, offices of Her Majesty's Commissioners, Upper Kensington Gore, London, S.W.:-

I propose to submit objects named below for approval by the Committee of Selection, and, in the event of their being accepted, I agree to conform to such rules and regulations as Her Majesty's Commissioners may from time to time lay down.

\*Division No. \_\_\_\_\_ Class No. \_\_\_\_\_ and Section, if any, \_\_\_\_\_ to which the object belongs.

Signature of the Applicant \_\_\_\_\_

Postal Address in full \_\_\_\_\_

Her Majesty's Commissioners will be glad of the fullest information applicants may be in a position to give at once respecting the objects they desire to submit for exhibition in 1874, stating the division, class, and section to which such objects belong; according to the list on the other side.

\* See list on the other side.

NOTE.—Persons wishing to exhibit machinery are requested to supply the information specified on the Form No. 10<sup>a</sup>, which can be had on application to the Secretary.

pecial Regu-  
lations of 1874.

THE THREE DIVISIONS OF THIS EXHIBITION WILL BE SUBDIVIDED INTO  
THE FOLLOWING CLASSES:

**DIVISION I.—FINE ARTS.** Fine arts applied or not applied to works of utility.

Class 1. Painting of all kinds, in oil, water colours, distemper, wax, enamel, and on glass, porcelain, &c. Mosaics; drawings of all kinds.

„ 2. Sculpture, modelling, carving and chasing in marble, stone, wood, terra-cotta, metal, ivory, glass, precious stones, and any other materials.

„ 3. Engraving, lithography, photography as a fine art, executed in the preceding twelve months.

„ 4. Architectural designs and drawings, photographs of completed buildings, studies or restorations of existing buildings, and models.

„ 5. Tapestries, carpets, embroideries, shawls, lace, &c., shown not as manufactures, but for the fine art of their design in form or colour.

„ 6. Designs for all kinds of decorative manufactures.

„ 7. Reproductions, *i.e.*, exact full size copies of ancient or mediæval pictures painted before A.D. 1556. Reproductions of mosaics and enamels; copies in plaster and fictile ivory. Electrotypes of ancient works of art, &c.

**DIVISION II.—MANUFACTURES.** Machinery, substances, and processes.

Class 8. Lace (hand and machine made).

„ 9. Civil engineering, architectural and building contrivances.

- a.* Civil engineering, architectural and building contrivances.
- b.* Sanitary apparatus, and constructions.
- c.* Cement and plaster work, &c.

„ 10. Heating by all methods and kinds of fuel.

„ 11. Leather, including saddlery and harness.

- a.* Leather, and manufactures of leather.
- b.* Saddlery, harness, &c.

„ 12. Bookbinding.

„ 13. Foreign wines, in the vaults of the Royal Albert Hall.

Machinery and raw materials for the group.

**DIVISION III., Class 14.—RECENT SCIENTIFIC INVENTIONS AND NEW  
DISCOVERIES OF ALL KINDS.**

Form No. 10<sup>1</sup>.

The following information should be supplied, with the form of preliminary application (No. 10), by proposing exhibitors of machinery.

- a.* A plan of each machine, showing the position of driven pulleys, the minimum space required for attendants, and indicating the parts of the machine which should be placed most prominently for inspection by the public. An elevation would also be of use, if it could be supplied without inconvenience.
- b.* A plan and section of the foundations required.
- c.* The weight of the machine.

d. The amount of motive-power in actual horse-power required from main shafting. Special Regulations of 1874

e. Should water, steam, or gas be required, all necessary information as to the quantities of the requisite supplies, which must be paid for by the exhibitor.

*Space Required.*

Glass-case space :—Length, \_\_\_\_\_ Width, \_\_\_\_\_ Height, \_\_\_\_\_  
 Floor " " " \_\_\_\_\_  
 Counter " " " \_\_\_\_\_  
 Wall " Height, \_\_\_\_\_ Width, \_\_\_\_\_ Projection, \_\_\_\_\_

*Requirement for Processes and Machinery in Motion.*

Actual horse-power required \_\_\_\_\_  
 Gallons of water per hour \_\_\_\_\_  
 Cubic feet of gas per hour \_\_\_\_\_  
 Diameter of steam supply pipe \_\_\_\_\_  
 Pressure of steam per square inch \_\_\_\_\_  
 cwt.      qrs.      lbs.  
 Weight of each machine \_\_\_\_\_  
 Signature \_\_\_\_\_  
 and Address \_\_\_\_\_  
 of intending \_\_\_\_\_  
 Exhibitor \_\_\_\_\_

Form No. 11.

LONDON INTERNATIONAL EXHIBITION OF 1874.

*Permanent Committee for the Representation of British Pictures.*

The Marquis of Westminster, K.G.	F. W. Cossens, Esq.
The Earl Fitzwilliam, K.G.	B. Dobree, Esq.
The Earl of Dunmore.	H. W. Eaton, Esq., M.P.
Lord Ronald Leveson-Gower, M.P.	W. Fenton, Esq.
Viscount Powerscourt.	Joshua Fielden, Esq., M.P.
Sir Richard Wallace, Bart., M.P.	J. S. Forbes, Esq.
Sir James Watts.	John Fowler, Esq., C.E.
S. Addington, Esq.	W. Graham, Esq., M.P.
W. Agnew, Esq.	J. C. Harter, Esq.
Captain W. Baldwin.	J. Snowdon Henry, Esq., M.P.
E. L. S. Benzon, Esq.	John Hick, Esq., M.P.
H. W. F. Bolckow, Esq., M.P.	Thomas Johnson, Esq.
A. H. Brown, Esq., M.P.	John Kelk, Esq.
A. J. Brunton, Esq.	W. Leaf, Esq.
E. J. Coleman, Esq.	C. Lucas, Esq.
Alexander Collie, Esq.	T. Lucas, Esq.
O. E. Coope, Esq.	J. N. Mappin, Esq.

Special Regu- Hugh Mason, Esq.  
lations of 1874. C. P. Matthews, Esq.  
J. S. Morgan, Esq.  
A. Morrison, Esq.  
George Paine, Esq.  
John Pender, Esq., M.P.  
W. Quilter, Esq.  
R. Rawlinson, Esq.

Samuel Redgrave, Esq.  
James Reiss, Esq.  
William Smith, Esq., F.S.A.  
Charles Waring, Esq.  
H. Waring, Esq.  
W. Waring, Esq.  
J. Kemp Welch, Esq.

*Works of Deceased Artists.*

Collections of the works of deceased eminent British artists will be made every year by Her Majesty's Commissioners, to illustrate their career. Thus, in 1873, the works of John Phillip, R.A., and Thomas Creswick, R.A., were collected. It is proposed to follow a similar course in future years with the works of other eminent deceased artists. Her Majesty's Commissioners have accordingly decided to invite the owners of pictures painted by the following artists to intimate their willingness to lend such works for the International Exhibition of 1874, and they request to be favoured with any information respecting them:—

*Painters in Oil.*

	Died.		Died.
John Constable, R.A. -	- 1837	David Roberts, R.A. -	- 1864
Augustus Egg, R.A. -	- 1863	David Wilkie, R.A. -	- 1841

*Painters in Water Colours.*

	Died.		Died.
J. Coney - -	- 1833	A. Pugin - -	- 1832
J. S. Cotman - -	- 1842	J. M. W. Turner, R.A.	
F. Mackenzie - -	- 1854	(Architecture only)	- 1851
S. Prout - -	- 1852	C. Wild - -	- 1835

In the case of any distinguished artist recently deceased, a selection of his works may be exhibited as a group.

Sketches made by artists in furtherance of their works, also the works of amateurs illustrating their travels, are eligible for admission.

Collectors who may desire to exhibit their collections of fine arts together may have space allotted upon making application before January 1st in each year.

Annual International Exhibition Offices,  
5, Upper Kensington Gore, S.W.

## APPENDIX VII.

CEREMONIAL TO BE OBSERVED AT THE STATE OPENING OF State Cere-  
 THE INTERNATIONAL EXHIBITION, ON MONDAY, 1ST MAY, monial in 1871.  
 1871.

## CONTENTS.

Ceremonial.  
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 " " Fine Art Committees.  
 " " Official Staff (Civil).  
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 " " Miscellaneous.  
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 Members of the Society of Arts.

List of Invitations—*cont.*  
 Members of the Council of the Royal Horticultural Society.  
 Official Reporters.  
 High Sheriffs.  
 Mayors and Provosts.  
 Members of Musical Committee.  
 Chairmen of Chambers of Commerce.  
 Masters of City Companies.  
 Exhibition of Musical Art.  
 " Overture.  
 " Chorale.  
 " Gallia.  
 " Grand March.  
 " Dramatic Cantata.

CEREMONIAL for opening the International Exhibition of 1871, on Monday, the 1st of May, at Twelve o'clock, on behalf of THE QUEEN, by HIS ROYAL HIGHNESS THE PRINCE OF WALES, accompanied by HER ROYAL HIGHNESS THE PRINCESS HELENA OF GREAT BRITAIN AND IRELAND, PRINCESS CHRISTIAN OF SCHLESWIG-HOLSTEIN.

His Royal Highness the Prince of Wales, accompanied by their Royal Highnesses the Prince and Princess Christian of Schleswig-Holstein, the Count and Countess of Flanders, and His Highness Prince John of Glücksburg, and attended by the Great Officers, and by Her Majesty's Household in Waiting, will leave Buckingham Palace at half-past eleven o'clock.

The Carriage Procession will be formed in the following Order:—

## FIRST CARRIAGE.

Major G. H. Grey, Equerry to His Royal Highness the Prince of Wales.	In attendance on His Highness Prince John of Glücksburg.
Lieutenant-Colonel C. Teesdale, C.B., V.C.	Equerry to His Royal Highness the Prince of Wales.
Lieutenant-Colonel Burnell	The Gentleman in attendance on His Highness the Count of Flanders.

State Cere-  
monial in 1871.

SECOND CARRIAGE.	
Colonel Stephenson, C.B.	- The Field Officer in Brigade Waiting.
Colonel D. Baillie	- The Silver Stick in Waiting.
Lieutenant-Colonel G. G. Gordon	- In attendance on their Royal High- nesses the Prince and Princess Christian of Schleswig-Holstein.
Mr. F. Knollys	- The Private Secretary to His Royal Highness the Prince of Wales.

#### THIRD CARRIAGE.

The Honourable Alexander T. Fitzmaurice	The Groom in Waiting to His Royal Highness the Prince of Wales.
Colonel H. L. Gardiner	- The Groom in Waiting.
The Lord Alfred Paget	- The Clerk Marshal.
The Marquis of Hamilton	- The Lord in Waiting to His Royal Highness the Prince of Wales.

#### FOURTH CARRIAGE.

The Earl of Morley	- The Lord in Waiting.
General Lord Strathnairn, G.C.B.	- The Gold Stick in Waiting.
The Lady in attendance on Her Royal Highness the Countess of Flanders.	
The Lady Susan Leslie Melville	- The Lady in attendance on Her Royal Highness Princess Christian of Schleswig-Holstein.

#### FIFTH CARRIAGE.

The Viscount Sydney, G.C.B.	- The Lord Chamberlain.
The Earl of Bessborough	- The Lord Steward.
The Duchess of Sutherland (Countess of Cromartie)	- The Mistress of the Robes.

#### SIXTH CARRIAGE.

The Marquis of Ailesbury, K.G.	- The Master of the Horse.
	His Highness the Prince John of Glücksburg.
His Royal Highness the Prince Christian of Schleswig-Holstein, K.G.	

#### SEVENTH CARRIAGE.

Her Royal Highness the Countess of Flanders.	
His Royal Highness the Count of Flanders.	
Her Royal Highness the Princess Helena of Great Britain and Ireland, Princess	
Christian of Schleswig-Holstein.	

His Royal Highness the Prince of Wales, K.G.

A captain's escort of the Household Cavalry will accompany the procession.

A guard of honour will mount at the Queen's entrance to the Royal Albert Hall, where His Royal Highness the Prince of Wales, and the Royal Personages accompanying him, will be received by Her Majesty's Commissioners for the Exhibition of 1851, and conducted in procession through the corridors to the

conservatory in the Horticultural Gardens, where a daïs will have been prepared for their reception, and where the Secretary of State for the Home Department will await their Royal Highnesses.

His Royal Highness the Duke of Cambridge, and the other members of the Royal Family who have accepted invitations to be present, will also be received at the Queen's entrance of the Albert Hall, and conducted to the conservatory.

The 148th Psalm will be sung, after which the following presentations will be made to His Royal Highness the Prince of Wales, and Her Royal Highness the Princess Helena of Great Britain, Princess Christian of Schleswig-Holstein.

By His Royal Highness the Duke of Cambridge, K.G.—

The Inspector-General of Fortifications, the Deputy Adjutant-General of the Royal Engineers, and the officers of the Royal Engineers, &c., assisting in the Exhibition.

By His Royal Highness the Prince Christian of Schleswig-Holstein, K.G.—  
The officers of the Exhibition Staff, and Members of Committees engaged in the Fine Arts Division.

By His Serene Highness the Prince of Teck, G.C.B.—

The officers of the Exhibition Staff, and Members of Committees engaged in the Industrial Division.

By the Earl Granville, K.G., Secretary of State for Foreign Affairs—  
The Foreign Commissioners of the Exhibition accredited through the Foreign Office.

By Lord Henry Gordon Lennox, M.P., Chairman of the Council of the Society of Arts—  
The Council of the Society of Arts.

By the Bishop of Winchester—  
The Council of the Royal Horticultural Society.

By Lord Houghton—  
The Official Reporters for the Exhibition.

By the Right Hon. H. A. Bruce, Secretary of State for the Home Department—  
The High Sheriffs of Counties of the United Kingdom who have accepted the invitation of the Commissioners.

The Lord Mayor, Sheriffs, and Recorder of the City of London, and the Municipal Authorities of the United Kingdom who have accepted the invitation of Her Majesty's Commissioners.

By the Right Honourable Sir John Pakington, Bart., G.C.B.—  
The Musical Committee for the Exhibition.

By the Right Honourable Chichester Fortescue, President of the Board of Trade—

The Chairmen of the Chambers of Commerce who have accepted the invitation of the Commissioners.

By the Right Honourable the Lord Mayor of London—  
The City Companies.

The Secretary of Her Majesty's Commissioners will hand their Report to the Secretary of State for the Home Department, by whom it will be presented to

**State Ceremo-** His Royal Highness the Prince of Wales, who will receive it on the part of Her  
**nial in 1871.** Majesty.

His Royal Highness will then, in the Queen's name, proclaim the opening of the Exhibition, first in the conservatory, and then from the balcony looking into the Horticultural Gardens.

The opening will afterwards be announced to the public by a flourish of trumpets and a salute from a battery of the Royal Artillery stationed in the Park.

The procession will then be again formed, and His Royal Highness the Prince of Wales, with the other Royal Personages, will be conducted through the Fine Arts galleries to the conservatory in the Horticultural Gardens, and to the Queen's entrance to the Royal Albert Hall, from whence the carriage procession will return to Buckingham Palace, in the same order as on arrival.

The Exhibition of Musical Art will take place later in the afternoon in the Royal Albert Hall.

The route of the procession will be by Constitution Hill and Hyde Park as far as the Alexander Gate, and will be kept by the Household Troops.

The Yeomen of the Guard will be on duty in the conservatory.

Levée dress will be worn.

Ladies in morning dress.

Collar day.

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#### THE ORDER OF PROCESSION.

Heralds and State Trumpeters.	The Mayors of the United Kingdom.
Contractor for the Building.	The City Companies.
The Fine Arts Staff and Committee for the Exhibition.	The Lord Mayor of London, &c.
The Industrial Staff and Committees of the Exhibition.	The High Sheriffs.
The Military Staff of the Exhibition.	The General Purposes Committee for the Exhibition.
The Foreign Acting Commissioners.	Her Majesty's Commissioners for the Exhibition.
The Council of the Royal Horticultural Society.	His Royal Highness the Prince of Wales.
The Council of the Society of Arts.	The Royal Personages, Maharajah, &c.
Official Reporters.	The Court.
The Chairmen of the Chambers of Commerce.	

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Sung by CHORUS, with accompaniments of Trumpets, Shawms, and the AUDIENCE,  
in the Conservatory.

State Cere-  
monial in 1871.

## VERSION OF 148th PSALM.

AUSTRIA.

Praise the Lord! ye heav'ns a-dore Him! Praise Him an-gels in the height.

Sun and moon re-joice be-fore Him; Praise Him all ye stars and light.

Praise the Lord for He hath spo-ken; Worlds His migh-ty voice o-bey'd;

Laws that ne-ver shall be bro-ken For their gui-dance He hath made.

Praise the Lord! for He is glorious; Never shall His promise fail;  
He hath made His saints victorious; Sin and death shall not prevail.

Praise the God of our salvation; Hosts on high His power proclaim;  
Heaven and earth, and all creation, Laud and magnify His name.

Amen.

State Cere-  
monial in 1871.

HER MAJESTY'S COMMISSIONERS FOR THE EXHIBITION  
OF 1851.

H.R.H. the Prince of Wales, K.G., President.	The Right Hon. Sir Alexander Y. Spearman, Bart.
H.R.H. the Prince Christian, K.G.	The Right Hon. Acton S. Ayrton, M.P., or First Commissioner of Her Majesty's Works for the time being.
H.S.H. the Prince Teck.	Sir Charles Lyell, Bart.
The Earl De Grey and Ripon, K.G.	Sir Roderick I. Murchison, Bart, K.C.B.
The Duke of Buccleuch, K.G.	Sir Thomas Bazley, Bart., M.P.
The Duke of Buckingham and Chandos.	Major-General Sir T. M. Biddulph, K.C.B.
The Earl of Derby.	Sir Francis Grant, P.R.A.
The Earl Granville, K.G.	Sir Francis R. Sandford.
The Earl Russell, K.G.	Sir William Tite, M.P.
The Lord Portman.	Thomas Baring, Esq., M.P.
The Lord Overstone.	Alexander J. B. Beresford-Hope, Esq., M.P.
The Right Hon. William Ewart Gladstone, M.P.	Edgar A. Bowring, Esq., C.B., M.P.
The Right Hon. Benjamin Disraeli, M.P.	Thomas Fairbairn, Esq.
The Right Hon. Robert Lowe, M.P.	Thomas Field Gibson, Esq.
The Right Hon. Sir Stafford H. Northcote, Bart., C.B., M.P.	Dr. Lyon Playfair, C.B., M.P.
The Right Hon. Henry A. Bruce, M.P.	Colonel Henry F. Ponsonby.
The Right Hon. Chichester S. Fortescue, M.P., or President of the Board of Trade for the time being.	Joseph Prestwich, Esq., F.R.S.
The Right Hon. William E. Forster, M.P., or Vice-President of the Committee of Council on Education for the time being.	Henry Thring, Esq.
	Charles B. Vignoles, Esq., F.R.S.
	Lieut.-Colonel Henry Y. D. Scott, R.E., Secretary.
	L. C. Sayles, Clerk.

GENERAL PURPOSES COMMITTEE, &c.

The Marquis of Lansdowne.
The Lord Northbrook.
Henry Cole, Esq., C.B.
John Fowler, Esq., C.E.
Warren de la Rue, Esq., F.R.S.

LIST OF INVITATIONS.

The following Members of the OFFICIAL STAFF (MILITARY) have been invited,  
and those accepting the invitation will be presented by H.R.H. The DUKE  
OF CAMBRIDGE :—

Sir Fredk. Chapman, K.C.B., R.E.
Lieut. Curling, R.E., A.D.C.
Col. Browne, C.B., R.E.
Capt. Martin, R.E.
Capt. Donnelly, R.E.
Capt. Festing, R.E.
Lieut. Davies, R.E.
Lieut. Grover, R.E.

Lieut. Clayton, R.E.
Lieut. Harris, R.E.
Lieut. English, R.E.
Lieut. Cole, R.E.
Lieut. Curling, R.E.
Lieut. Seton, R.E.
Lieut.-Col. Stuart Wortley.
Capt. Maunsell.

The following Members of the FINE ART COMMITTEES and OFFICIAL STAFF  
(CIVIL) have been invited, and those accepting the invitation will be  
presented by H.R.H. The PRINCE CHRISTIAN, K.G. :—

Sir William Boxall, R.A.
Richard Redgrave, Esq., R.A.
J. R. Adamson, Esq.

J. C. Bowring, Esq.
The Viscount Bury, M.P.
The Lord Elcho, M.P.

Sir Coutts Lindsay, Bart.	A. G. Dallas, Esq.	State Cere-monial in 1871.
Alfred Elmore, Esq., R.A. (representing the Royal Academy).	W. Walkinshaw, Esq.	
Alfred Clint, Esq. (representing the Society of British Artists).	R. Fisher, Esq.	
Alfred Hunt, Esq. (representing the Society of Painters in Water Colours).	J. H. Robinson, Esq., R.A.	
Henry Warren, Esq. (representing the Institute of Painters in Water Colours).	G. Smith, Esq.	
F. Dillon, Esq.	W. Smith, Esq.	
H. S. Marks, Esq., A.R.A.	Dr. Diamond.	
F. W. Moody, Esq.	John Bell, Esq.	
Edward M. Barry, Esq., R.A. (representing the Royal Academy).	William C. Marshall, Esq., R.A. (representing the Royal Academy).	
Joseph Clarke, Esq. (representing the Royal Architectural Museum).	Richard Westmacott, Esq., R.A.	
James Fergusson, Esq.	Professor Archer.	
Professor Hayter Lewis.	H. A. Bowler, Esq.	
T. Roger Smith, Esq. (representing the Architectural Association).	Samuel Redgrave, Esq.	
Alfred Waterhouse, Esq.	Gilbert Redgrave, Esq.	
Richard Westmacott, Esq., R.A.	A. J. R. Trendell, Esq.	
Alexander J. B. Beresford Hope, Esq., M.P.	E. P. Bartlett, Esq.	
R. J. Gilman, Esq.	G. C. T. Bartley, Esq.	
H. M. Matheson, Esq.	J. Cundall, Esq.	
A. B. Mitford, Esq.	W. Smith, Esq.	
W. Walkinshaw, Esq.	T. Clack, Esq.	
H. Reeve, Esq.	T. Chesman, Esq.	
Sir Rutherford Alcock, K.C.B.	F. R. Fowke, Esq.	
	A. C. King, Esq.	
	J. F. Iselin, Esq.	
	H. Sandham, Esq.	
	R. F. Sketchley, Esq.	
	R. Thompson, Esq.	
	T. A. Wright, Esq.	

The following Members of the INDUSTRIAL ARTS and MISCELLANEOUS COMMITTEES and CIVIL STAFF have been invited, and those accepting the invitation will be presented by H.S.H. The PRINCE OF TECK, G.C.B.:—

The Earl of Lichfield.	John P. Bull, Esq.
Lord Sackville Cecil.	Hon. and Rev. F. Byng.
Sir Jules Benedict.	Dr Archibald Campbell.
Sir Charles Bright.	C. M. Campbell, Esq.
Sir William Fairbairn, Bart.	F. S. Cary, Esq.
Sir Duncan Gibb, Bart.	W. H. Clabburn, Esq.
Sir Richard Atwood Glas.	Hyde Clarke, Esq.
Sir Daniel Gooch, Bart., M.P.	Latimer Clark, Esq.
Sir William Thompson.	J. G. Crace, Esq.
Sir Charles Wheatstone.	Rt. Hon. W. Cowper Temple, M.P.
Sir Joseph Whitworth, Bart.	Dr. G. H. Davis.
S. Addington, Esq.	Rev. J. H. Edgar.
Rev. Dr. Adler.	Rev. J. Evans.
John Anderson, Esq.	Lieut.-Col. Ewart, R.E.
Professor D. T. Ansted.	Cyrus Field, Esq.
Dr. T. Armitage.	J. G. Fitch, Esq.
W. F. Barrett, Esq.	Professor W. H. Flower.
A. H. Bather, Esq.	David Forbes, Esq.
H. Bauerman, Esq.	C. Drury Fortnum, Esq.
Jacob Behrens, Esq., M.P.	Dr. Frankland.
Rev. G. C. Bell.	C. W. Franks, Esq.
Charles F. Beyer, Esq.	Professor Fuller.
Rev. R. H. Blair.	Otto Goldschmidt, Esq.
George H. Boughton, Esq.	Professor Goodeve.
Alfred Bourne, Esq.	Peter Graham, Esq.
H. A. Bowler, Esq.	William Harris, Esq.
Frederick J. Bramwell, Esq.	Wm. Hawes, Esq.
Rev. J. S. Brewer.	Thomas Hawksley, Esq.
J. Brinton, Esq.	John Hick, Esq., M.P.
Rev. W. H. Brookfield.	Dr. Hogg.
Charles Brooke, Esq.	M. D. Hollins, Esq.
Dr. Buchheim.	John Holms, Esq., M.P.

State Ceremonial in 1871.

G. Howard, Esq.  
 Professor William Hughes.  
 John Hullah, Esq.  
 J. F. Iselin, Esq.  
 Professor Jenkin.  
 Rev. J. B. Johns.  
 Edmund C. Johnson, Esq.  
 Owen Jones, Esq.  
 H. L. Lapworth, Esq.  
 W. G. Larkins, Esq.  
 G. A. Macfarren, Esq.  
 Charles Magniac, Esq., M.P.  
 S. S. Marling, Esq., M.P.  
 W. Matchwick, Esq.  
 Walter May, Esq.  
 William Menelaus, Esq.  
 C. W. Merrifield, Esq.  
 Rev. Muirhead Mitchell.  
 St. George Mivart, Esq.  
 Thomas Moore, Esq.  
 S. Morley, Esq., M.P.  
 Alfred Morrison, Esq.  
 John Pender, Esq.  
 John Penn, Esq.  
 F. Pitman, Esq.  
 John Platt, Esq., M.P.  
 Dr. Price.  
 Professor Ramsay.  
 John Ramsbottom, Esq.  
 E. G. Ravenstein, Esq.  
 Julius Reuter, Esq.  
 H. A. Ridgway, Esq.  
 Rev. Arthur Rigg.  
 H. W. Ripley, Esq.  
 W. Roberts, Esq.  
 John Robinson, Esq.  
 W. H. Salter, Esq.

R. L. Schmitz.  
 D. Schlesinger.  
 Dr. P. L. Selater.  
 Frank Ives Seudamore, Esq.  
 Rev. T. W. Sharpe.  
 C. William Siemens, Esq.  
 W. W. Smyth, Esq.  
 E. Carleton Tufnell, Esq.  
 Rev. J. Twisden.  
 Professor Tyndall.  
 Cromwell F. Varley, Esq.  
 Henry Vaughan, Esq.  
 H. S. Way, Esq.  
 Professor A. Williamson.  
 Professor Willis.  
 Rev. A. Wilson.  
 R. G. Wylde, Esq.  
 James Allport, Esq.  
 W. Cawkwell, Esq.  
 C. H. Eborall, Esq.  
 J. S. Forbes, Esq.  
 J. Grierson, Esq.  
 W. Johnstone, Esq.  
 J. P. Knight, Esq.  
 S. L. Mason, Esq.  
 Percy Morris, Esq.  
 Henry Oakley, Esq.  
 Archibald Scott, Esq.  
 J. Smithells, Esq.  
 T. Swarbrick, Esq.  
 W. Thorley, Esq.  
 W. G. Underdown, Esq.  
 Sir C. W. Dilke, Bart., M.P.  
 William Longman, Esq.  
 John Murray, Esq.  
 Philip C. Owen, Esq.  
 Wentworth L. Cole, Esq.

The following FOREIGN COMMISSIONERS have been invited, and those accepting the invitation to attend the Ceremony will be presented by the Secretary of State for Foreign Affairs, The EARL GRANVILLE, K.G. :—

*Argentine Confederation*—Senor Constant Santa Maria.  
*Austria*—M. Le Chevalier François de Wermuth.  
*Hungary*—M. Charles Louis Posner.  
*Baden*—Herr Turban.  
*Bavaria*—Professor Konrad Knoll, President of the Society of Artists at Munich.  
*Belgium*—R. Monseigneur le Comte de Flandre, Honorary President.  
*Baron T'Kint de Roodenbeke*, Senator, President.  
*Columbia*—James L. Hart, Esq., F.R.G.S., Consul for the United States of Colombia.  
*Denmark*—M. C. G. Hummel, Councillor of State, and Director of the Polytechnic Institution at Copenhagen.  
*France*—M. Ozenne, Councillor of State, Secretary-General to the Ministry of Agriculture and Commerce, Commissioner-General for the Annual International Exhibitions.  
*Hesse*—Herr Schleiermacher, Councillor of the Ministry of Finance, President of the Central Office for Commerce and Industry.  
*Italy*—Signor A. Baccani.  
*Norway*—M. O. Pihl.  
*Peru*—M. Jules Jarrifz.  
*Prussia and North German States*—  
*Rome*—H. E. Cardinal Berardi, Minister of Commerce.  
*Russia*—M. Boutowski, Privy Councillor, Director of the Department of Commerce and Manufactures.  
*San Salvador*—James L. Hart, Esq., F.R.G.S., Consul for San Salvador.  
*Saxe-Weimar*—Count Katckreuth.  
*Spain*—Senor A. Borrego.

*Sweden*—H.R.H. Prince Oscar, President; Baron A. H. Fock.

*Switzerland*—Albert Streckeisen, Esq., Consul-General for the Swiss Confederation.

*United States*—N. M. Beckwith, Esq. State Cere-  
*Württemberg*—Dr. Von Steinbeis, President of monial in 1871  
the Board of Trade and Commerce.

The following Members of the SOCIETY OF ARTS have been invited, and those accepting the invitation will be presented by The LORD HENRY G. LENNOX, M.P.:—

F. A. Abel, Esq., F.R.S.  
G. C. T. Bartley, Esq. (Treasurer).  
Sir W. H. Bodkin (Assistant Judge, V.P.).  
Edwin Chadwick, Esq., C.B.  
Hyde Clarke, Esq. (Treasurer).  
Henry Cole, Esq., C.B. (V.P.).  
Sir Daniel Cooper, Bart. (V.P.).  
Rt. Hon. W. Cowper-Temple, M.P. (V.P.).  
Earl De Grey and Ripon (V.P.).  
Lord De L'Isle and Dudley (V.P.).  
The Duke of Devonshire, K.G. (V.P.).  
Sir Chas. W. Dilke, Bart., M.P. (V.P.).  
Captain Donnelly, R.E.  
Captain Douglas Galton, C.B., F.R.S.  
Earl Granville, K.G., F.R.S. (V.P.).  
William Hawes, Esq., F.G.S. (V.P.).  
Chandos Wren Hoskyns, M.P. (V.P.).  
Lord Henry G. Lennox, M.P. (V.P. and  
Chairman of the Council).

Sir John Lubbock, Bart. (V.P.).  
Rear Admiral E. Ommanney, C.B., F.R.S.  
Right Hon. Sir J. S. Pakington, Bart., M.P. (V.P.).  
Samuel Redgrave, Esq. (V.P.).  
Rev. W. Rogers (V.P.).  
Bernhard Samuelson, Esq., M.P.  
Sir Francis Sandford (V.P.).  
Viscount Sandon, M.P.  
George A. Spottiswoode, Esq.  
Seymour Teulon, Esq. (V.P.).  
E. C. Tufnell, Esq.  
Thomas Twining, Esq. (V.P.).  
Henry Vaughan, Esq.  
James T. Ware, Esq.  
Lord Hatherley, F.R.S. (V.P.).  
Major-Gen. F. Eardley Wilmot, R.A., F.R.S.  
P. Le Neve Foster, Esq., M.A. (Sec.).

The following Members of the COUNCIL OF THE ROYAL HORTICULTURAL SOCIETY have been invited, and those accepting the invitation will be presented by THE RIGHT REVEREND THE BISHOP OF WINCHESTER:—

His Grace the Duke of Buccleuch, Montague House.  
James Bateman, Esq.  
Major R. Trevor Clarke.  
John Clutton, Esq.  
Rev. J. Dix.  
John Kelk, Esq.  
Lord Henry C. G. Lennox, M.P.  
E. J. Lowe, Esq., F.R.S.

W. Marshall, Esq.  
J. Russel Reeves, Esq., F.R.S., F.L.S.  
W. Wilson Saunders, Esq., F.R.S.  
Lieut.-Col. H. Y. D. Scott, R.E.  
H.S.H. the Prince of Teck.  
G. F. Wilson, Esq., F.R.S.  
The Bishop of Winchester.  
James Richards, Esq., Secretary.

The following OFFICIAL REPORTERS have been invited, and those accepting the invitation will be presented by The LORD HOUGHTON:—

Professor Abel.  
L. Arnaux, Esq.  
P. Bawden, Esq.  
C. D. Fortnum, Esq.  
Professor Goodeve.  
J. T. Gullick, Esq.  
J. Hullah, Esq.  
G. Leach, Esq.

R. Soden Smith, Esq.  
J. Marshall, Esq.  
Rev. M. Mitchell.  
Gambier Parry, Esq.  
J. H. Pollen, Esq.  
The Rev. Canon Rock.  
W. B. Scott, Esq.  
Sir Digby Wyatt.

## APPENDIX VII.

State Ceremonial in 1871. The following HIGH SHERIFFS have been invited, and those accepting the invitation will be presented by the Home Secretary, The RIGHT HON. H. A. BRUCE:—

Bedfordshire.	Carnarvonshire.	Tipperary.
Berkshire.	Denbighshire.	Tyrone.
Bucks.	Flintshire.	Waterford County.
Cambridgeshire and Huntingdonshire.	Glamorganshire.	Waterford City.
Cheshire.	Merionethshire.	Westmeath.
Cumberland.	Montgomeryshire.	Wexford.
Derbyshire.	Pembrokeshire.	Wicklow.
Devonshire.	Radnorshire.	
Dorsetshire.		Aberdeen.
Durham.	Antrim.	Argyll.
Essex.	Armagh.	Ayr.
Gloucestershire.	Carlow.	Banff.
Herefordshire.	Carrickfergus.	Berwick.
Hertfordshire.	Cavan.	Bute.
Kent.	Clare.	Caithness.
Leicestershire.	Cork.	Clackmannan.
Lincolnshire.	Cork City.	Cromarty.
Monmouthshire.	Donegal.	Dumbarton.
Norfolk.	Down.	Dumfries.
Northamptonshire.	Drogheda County Town.	Edinburgh.
Northumberland.	Dublin County.	Elgin or Moray.
Nottinghamshire.	Dublin City.	
Oxfordshire.	Fermanagh.	Fife.
Rutland.	Galway County.	Forfar.
Shropshire.	Galway Town.	Haddington.
Somersetshire.	Kerry.	Inverness.
County of Southampton.	Kildare.	Kincardine.
Staffordshire.	Kilkenny County.	Kincross.
Suffolk.	Kilkenny City.	Kirkcudbright.
Surrey.	King's County.	Lanark.
Sussex.	Leitrim.	Linlithgow.
Warwickshire.	Limerick County.	Nairn.
Westmoreland.	Limerick City.	Orkney and Shetland.
Wiltshire.	Londonderry City and County.	Peebles.
Worcestershire.	Longford.	Perth.
Yorkshire.	Louth.	Renfrew.
Middlesex.	Mayo.	Ross.
Anglesea.	Meath.	Roxburgh.
Breconshire.	Monaghan.	Selkirk.
Cardiganshire.	Queen's County.	Stirling.
Carmarthenshire.	Roscommon.	Sutherland.
	Sligo.	Wigtown.

The following MAYORS and PROVOSTS have been invited, and those accepting the invitation will be presented by the Home Secretary, The RIGHT HON. H. A. BRUCE:—

The Lord Mayor of York.	The Mayor of Beccles.
The Lord Mayor of London.	The Mayor of Bediord.
The Lord Provost of Edinburgh.	The Mayor of Belfast.
The Lord Mayor of Dublin.	The Mayor of Berwick-upon-Tweed.
The Provost of Aberdeen.	The Mayor of Beverley.
The Mayor of Abingdon.	The Mayor of Bewdley.
The Mayor of Andover.	The Mayor of Bideford.
The Mayor of Arundel.	The Mayor of Birmingham.
The Mayor of Ashton-under-Lyne.	The Mayor of Blackburn.
The Mayor of Banbury.	The Mayor of Bodmin.
The Mayor of Barnstaple.	The Mayor of Bolton, Lancashire.
The Mayor of Barrow-in-Furness.	The Mayor of Boston, Lincolnshire.
The Mayor of Basingstoke.	The Mayor of Bradford, Yorkshire.
The Mayor of Bath.	The Mayor of Brecon.

The Mayor of Bridgenorth.	The Mayor of Hertford.	State Cere-
The Mayor of Bridgwater.	The Mayor of Honiton.	monial in 1871.
The Mayor of Bridport.	The Mayor of Huddersfield.	
The Mayor of Brighton.	The Mayor of Hull.	
The Mayor of Bristol.	The Mayor of Huntingdon.	
The Mayor of Buckingham.	The Mayor of Hythe.	
The Mayor of Bury St. Edmunds.	The Mayor of Ipswich.	
The Mayor of Calne.	The Mayor of Newport (Isle of Wight).	
The Mayor of Cambridge.	The Provost of Jedburgh.	
The Vice-Chancellor of the University of Cambridge.	The Bailiff of Jersey.	
The Mayor of Canterbury.	The Chairman of the Board, Keighley.	
The Mayor of Cardiff.	The Mayor of Kendal.	
The Mayor of Carlisle.	The Mayor of Kidderminster.	
The Mayor of Carmarthen.	The Provost of Kilmarnock.	
The Mayor of Carnarvon.	The Mayor of King's Lynn.	
The Mayor of Cheltenham.	The Mayor of Kingston.	
The Mayor of Chester.	The Provost of Kirkcaldy.	
The Mayor of Chesterfield.	The Provost of Lanark.	
The Mayor of Chichester.	The Mayor of Lancaster.	
The Mayor of Chippenham.	The Mayor of Launceston.	
The Mayor of Chipping Norton.	The Mayor of Leeds.	
The Mayor of Chipping Wycombe.	The Mayor of Leicester.	
The Mayor of Colchester.	The Mayor of Leominster.	
The Mayor of Congleton.	The High Bailiff of Lewes.	
The Mayor of Cork.	The Mayor of Lichfield.	
The Mayor of Coventry.	The Mayor of Limerick.	
The Mayor of Dartmouth.	The Mayor of Lincoln.	
The Mayor of Daventry.	The Mayor of Liskeard.	
The Mayor of Deal.	The Mayor of Liverpool.	
The Mayor of Denbigh.	The Mayor of Louth (Lincolnshire).	
The Mayor of Derby.	The Mayor of Ludlow.	
The Mayor of Devizes.	The Mayor of Lyme Regis.	
The Mayor of Devonport.	The Mayor of Lymington.	
The Mayor of Doncaster.	The Mayor of Macclesfield.	
The Mayor of Dorchester.	The Mayor of Maidenhead.	
The Mayor of Dover.	The Mayor of Maidstone.	
The Mayor of Droitwich.	The Mayor of Maldon.	
The Mayor of Dudley.	The Mayor of Malmesbury.	
The Provost of Dumfries.	The Mayor of Manchester.	
The Provost of Dundee.	The Mayor of Margate.	
The Provost of Dunbar.	The Mayor of Marlborough.	
The Provost of Dunfermline.	The High Constable of Merthyr Tydvil.	
The Mayor of Durham.	The Mayor of Middlesborough.	
The Provost of Elgin.	The Provost of Montrose.	
The Mayor of Evesham.	The Mayor of Newark.	
The Mayor of Exeter.	The Mayor of Newbury.	
The Mayor of Eye.	The Mayor of Newcastle (Staffordshire).	
The Mayor of Falmouth (Penrhyn).	The Mayor of Newcastle-on-Tyne.	
The Mayor of Faversham.	The Mayor of Newport (Monmouth).	
The Mayor of Folkestone.	The Mayor of Northampton.	
The Provost of Forfar.	The Mayor of Norwich.	
The Mayor of Gateshead.	The Mayor of Nottingham.	
The Provost of Glasgow.	The Mayor of Oldham.	
The Mayor of Glastonbury.	The Mayor of Oswestry.	
The Mayor of Gloucester.	The Mayor of Oxford.	
The Mayor of Godalming.	The Provost of Paisley.	
The Mayor of Grantham.	The Mayor of Pembroke.	
The Mayor of Gravesend.	The Mayor of Penzance.	
The Mayor of Great Grimsby.	The Mayor of Peterborough.	
The Provost of Greenock.	The Provost of Perth.	
The Mayor of Guildford.	The Mayor of Plymouth.	
The Chief Magistrate of Guernsey.	The Mayor of Pontefract.	
The Provost of Haddington.	The Mayor of Poole.	
The Mayor of Halifax.	The Mayor of Portsmouth.	
The Mayor of Hartlepool.	The Mayor of Preston.	
The Mayor of Harwich.	The Mayor of Reading.	
The Mayor of Hastings.	The Mayor of Reigate.	
The Mayor of Helston.	The Mayor of Retford, East.	
The Mayor of Hereford.	The Mayor of Richmond (Yorkshire).	
	The Mayor of Ripon.	

## APPENDIX VII.

State Ceremonial in 1871.

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The Mayor of Rochester.  
 The Mayor of Romsey, Hants.  
 The Mayor of Rye.  
 The Mayor of Saffron Walden.  
 The Mayor of Salford.  
 The Mayor of Salisbury.  
 The Mayor of Sandwich.  
 The Mayor of Scarborough.  
 The Provost of Selkirk.  
 The Mayor of Sheffield.  
 The Mayor of Shrewsbury.  
 The Mayor of Southampton.  
 The Mayor of South Molton.  
 The Mayor of South Shields.  
 The Mayor of Stafford.  
 The Mayor of Stamford.  
 The Mayor of St. Alban's.  
 The Mayor of St. Ives.  
 The Provost of Stirling.  
 The Mayor of Stockport.  
 The Mayor of Stockton.  
 The Mayor of Stratford-on-Avon.  
 The Returning Officer of Stroud.  
 The Mayor of Sudbury.  
 The Mayor of Sunderland.  
 The Mayor of Swansea.  
 The Mayor of Tamworth.

The Mayor of Taunton.  
 The Mayor of Tewkesbury.  
 The Mayor of Thetford.  
 The Mayor of Tiverton.  
 The Mayor of Torrington.  
 The Mayor of Totnes.  
 The Mayor of Truro.  
 The Mayor of Tynemouth.  
 The Mayor of Wakefield.  
 The Mayor of Walsall.  
 The Mayor of Wallingford.  
 The Mayor of Wareham.  
 The Mayor of Warrington.  
 The Mayor of Warwick.  
 The Mayor of Waterford.  
 The Mayor of Wells.  
 The Mayor of Wexford.  
 The Mayor of Weymouth.  
 The Mayor of Wigan.  
 The Mayor of Winchester.  
 The Mayor of Windsor.  
 The Mayor of Wisbeach.  
 The Mayor of Wolverhampton.  
 The Mayor of Woodstock.  
 The Mayor of Worcester.  
 The Mayor of Yarmouth.  
 The High Bailiff of Westminster.

The following members of MUSICAL COMMITTEE have been invited, and those accepting the invitation will be presented by The RIGHT HON. SIR JOHN PAKINGTON, BART., G.C.B., M.P.:-

The Earl of Wilton.  
 Lord Gerald Fitzgerald.  
 The Right Hon. Sir John Pakington, Bart.,  
 G.C.B., M.P.  
 The Hon. Seymour Egerton.  
 Frederic Clay, Esq.

A. S. Cole, Esq.  
 Frank Morrison, Esq.  
 M. Gounod.  
 A. Sullivan, Esq.  
 Chevalier Pinsuti.  
 Dr. Miller.

The following CHAIRMEN OF THE CHAMBERS OF COMMERCE have been invited, and those who have accepted the invitation will be presented by the President of the Board of Trade, The RIGHT HON. CHICHESTER FORTESCUE, M.P.:-

Aberdeen.  
 Batley.  
 Belfast.  
 Birmingham.  
 Bradford.  
 Bristol.  
 Cardiff.  
 Cork.  
 Coventry.  
 Darlington.  
 Derby.  
 Dewsbury.  
 Douglas (Isle of Man).  
 Dover.  
 Dublin.  
 Dundee.  
 Edinburgh.  
 Falmouth.  
 Glasgow.  
 Gloucester.

Goole.  
 Greenock.  
 Halifax.  
 Hartlepool (West).  
 Holmfirth.  
 Huddersfield.  
 Hull.  
 Kendal.  
 Leeds.  
 Leith.  
 Limerick.  
 Liverpool (American).  
 Liverpool.  
 Llanelly.  
 Macclesfield.  
 Manchester.  
 Middlesborough.  
 Morley.  
 Newcastle-on-Tyne.  
 Newport (Mon.).

Northampton.  
 North Shields.  
 Norwich.  
 Nottingham.  
 Plymouth.  
 Rochdale.  
 Runcorn and Upper Mersey.  
 Salt Chamber, Northwich.  
 Sheffield.  
 Shoreham.  
 South of Scotland.  
 South Shields.  
 Southampton.  
 Stockton-on-Tees.  
 Wakefield.  
 Waterford.  
 Wick.  
 Wolverhampton.  
 Worcester.

The MASTERS of the following CITY COMPANIES have been invited, and those accepting the invitation will be presented by The RIGHT HON. THE LORD MAYOR :—

Armourers and Braziers.	Feltmakers.	Musicians.
Apothecaries.	Fishmongers.	Needle Makers.
Bakers.	Founders.	Painter Stainers.
Barbers.	Fletchers.	Patten Makers.
Basket Makers.	Framework Knitters.	Pewterers.
Bowyers.	Fruiterers.	Plasterers.
Brewers.	Girdlers.	Plumbers.
Broderers.	Glass-sellers.	Poulterers.
Butchers.	Glaziers.	Salters.
Blacksmiths.	Glovers.	Saddlers.
Carmen.	Goldsmiths.	Scriveners.
Carpenters.	Gold and Silver Wire Draw- ers.	Shipwrights.
Clockmakers.	Gunmakers.	Skinner.
Clothworkers.	Grocers.	Spectacle Makers.
Coach and Harness Makers.	Haberdashers.	Stationers.
Cooks.	Horners.	Tin Plate Workers.
Coopers.	Ironmongers.	Tallow Chandlers.
Cordwainers.	Inholders.	Tilers and Bricklayers.
Cutlers.	Leathersellers.	Turners.
Curriers.	Loriners.	Upholders.
Distillers.	Masons.	Vintners.
Drapers.	Makers of Playing Cards.	Wheelwrights.
Dyers.	Mercers.	Wax Chandlers.
Fan Makers.	Merchant Taylors.	Woolmen.
Farriers.		Weavers.
Fellowship Porters.		

The EXHIBITION of MUSICAL ART, at Three o'clock, in the ROYAL  
ALBERT HALL.

Conductor, SIR MICHAEL COSTA.

No. 1.—OVERTURE.

No. 2.—CHORALE, representing Italian music. Composed and conducted by Chevalier Pinsuti.

No. 3.—GALLIA. Composed and conducted by M. Ch. Gounod.  
The words from the Bible.

No. 4.—GRAND MARCH, representing German music. Composed by Dr. F. Hiller.

DRAMATIC CANTATA. Composed and conducted by Mr. Arthur Sullivan.  
Words by Tom Taylor.

No. 6.—OVERTURE.

No. 7.—GOD SAVE THE QUEEN, by the chorus and audience.

APPENDIX VIII.

OFFICIAL RECEPTION.

27th April 1872.

Official Recep-  
tion in 1872.

1. The Royal Albert Hall and the Orchard Entrances of the Exhibition will be opened at 8 p.m.
2. His Royal Highness the Duke of Edinburgh, K.G., will arrive at 8.30 p.m. by the Royal entrance of the Albert Hall, where he will be met by Her Majesty's Commissioners, who will accompany him to the arena.

Official Reception in 1872.

3. Foreign Ambassadors, Her Majesty's Ministers, and other distinguished personages, will assemble in the arena.
4. His Royal Highness the Duke of Edinburgh, after passing through the Hall, will visit the foreign and British picture galleries, and will then return through the arena of the Hall to the Royal entrance.
5. Only those persons whose invitation cards bear the words "Pass to arena" will be admitted to that part of the Hall, until after His Royal Highness the Duke of Edinburgh has proceeded to the picture galleries.
6. All other invitation cards will admit to the gallery and balcony of the Hall, and to the picture galleries of the Exhibition, seat-holders in the Hall proceeding, if they see fit, to their own stalls and boxes.
7. The most convenient entrances for those persons who wish to be present in the Hall will therefore be the east and west gallery entrances, and the east and west balcony entrances.
8. The nearest entrance to the foreign picture gallery is that in Exhibition Road; that in Prince Albert's Road is nearest to the British picture gallery.
9. The band of the Royal Artillery will perform in the Royal Albert Hall, the Grenadier Guards, &c. in the conservatory and picture galleries. Performances will also be given on the great organ in the Royal Albert Hall.
10. Evening dress, and not uniforms, will be worn by Her Majesty's Commissioners on the evening of the 27th inst.
11. All persons must produce their cards of invitation upon entering, as the presentation of the season ticket without an invitation card will not ensure admission.

His Royal Highness the Prince Arthur, Her Royal Highness the Princess Louise, Marchioness of Lorne; His Royal Highness the Duke of Cambridge, and the Marquis of Lorne, have accepted the invitation of His Royal Highness the Duke of Edinburgh and Her Majesty's Commissioners, and will be present this evening.

The list of those who have received invitations includes

Her Majesty's Ministers,  
The Committees of Selection,  
The Committees connected with the Arrangement of the Exhibition,  
The Official Staff,  
The Foreign Commissioners,  
The Council of the Society of Arts,  
The Council of the Royal Horticultural Society,  
The Lord Mayor and Corporation of London.

## MAYORS AND PROVOSTS.

Official Reception in 1872.

The Lord Mayor of York.	The Provost of Dundee.
The Lord Mayor of London.	The Provost of Dunbar.
The Lord Provost of Edinburgh.	The Provost of Dunfermline.
The Lord Mayor of Dublin.	The Mayor of Durham.
The Provost of Aberdeen.	The Provost of Elgin.
The Mayor of Abingdon.	The Mayor of Evesham.
The Mayor of Andover.	The Mayor of Exeter.
The Mayor of Arundel.	The Mayor of Eye.
The Mayor of Ashton-under-Lyne.	The Mayor of Falmouth (Penrhyn).
The Mayor of Banbury.	The Mayor of Faversham.
The Mayor of Barnstaple.	The Mayor of Folkestone.
The Mayor of Barrow-in-Furness.	The Provost of Forfar.
The Mayor of Basingstoke.	The Mayor of Gateshead.
The Mayor of Bath.	The Provost of Glasgow.
The Mayor of Beccles.	The Mayor of Glastonbury.
The Mayor of Bedford.	The Mayor of Gloucester.
The Mayor of Belfast.	The Mayor of Godalming.
The Mayor of Berwick-upon-Tweed.	The Mayor of Grantham.
The Mayor of Beverley.	The Mayor of Gravesend.
The Mayor of Bewdley.	The Mayor of Great Grimsby.
The Mayor of Bideford.	The Provost of Greenock.
The Mayor of Birmingham.	The Mayor of Guildford.
The Mayor of Blackburn.	The Chief Magistrate of Guernsey.
The Mayor of Bodmin.	The Provost of Haddington.
The Mayor of Bolton, Lancashire.	The Mayor of Halifax.
The Mayor of Boston, Lincolnshire.	The Mayor of Hartlepool.
The Mayor of Bradford, Yorkshire.	The Mayor of Harwich.
The Mayor of Brecon.	The Mayor of Hastings.
The Mayor of Bridgenorth.	The Mayor of Helston.
The Mayor of Bridgwater.	The Mayor of Hereford.
The Mayor of Bridport.	The Mayor of Hertford.
The Mayor of Brighton.	The Mayor of Honiton.
The Mayor of Bristol.	The Mayor of Huddersfield.
The Mayor of Buckingham.	The Mayor of Hull.
The Mayor of Bury St. Edmunds.	The Mayor of Huntingdon.
The Mayor of Calne.	The Mayor of Hythe.
The Mayor of Cambridge.	The Mayor of Ipswich.
The Vice-Chancellor of the University of Cambridge.	The Mayor of Newport (Isle of Wight).
The Mayor of Canterbury.	The Provost of Jedburgh.
The Mayor of Cardiff.	The Bailiff of Jersey.
The Mayor of Carlisle.	The Chairman of the Board, Keighley.
The Mayor of Carmarthen.	The Mayor of Kendal.
The Mayor of Carnarvon.	The Mayor of Kidderminster.
The Mayor of Cheltenham.	The Provost of Kilmarnock.
The Mayor of Chester.	The Mayor of King's Lynn.
The Mayor of Chesterfield.	The Mayor of Kingston.
The Mayor of Chichester.	The Provost of Kircaldy.
The Mayor of Chippenham.	The Provost of Lanark.
The Mayor of Chipping Norton.	The Mayor of Lancaster.
The Mayor of Chipping Wycombe.	The Mayor of Launceston.
The Mayor of Colchester.	The Mayor of Leeds.
The Mayor of Congleton.	The Mayor of Leicester.
The Mayor of Cork.	The Mayor of Leominster.
The Mayor of Coventry.	The High Bailiff of Lewes.
The Mayor of Dartmouth.	The Mayor of Lichfield.
The Mayor of Daventry.	The Mayor of Limerick.
The Mayor of Deal.	The Mayor of Lincoln.
The Mayor of Denbigh.	The Mayor of Liskeard.
The Mayor of Derby.	The Mayor of Liverpool.
The Mayor of Devizes.	The Mayor of Louth (Lincolnshire).
The Mayor of Devonport.	The Mayor of Ludlow.
The Mayor of Doncaster.	The Mayor of Lyme Regis.
The Mayor of Dorchester.	The Mayor of Lymington.
The Mayor of Dover.	The Mayor of Macclesfield.
The Mayor of Droitwich.	The Mayor of Maidenhead.
The Mayor of Dudley.	The Mayor of Maidstone.
The Provost of Dumfries.	The Mayor of Maldon.
	The Mayor of Malmesbury.

Official Reception in 1872.

The Mayor of Manchester.  
The Mayor of Margate.  
The Mayor of Marlborough.  
The High Constable of Merthyr Tydvil.  
The Mayor of Middlesborough.  
The Provost of Montrose.  
The Mayor of Newark.  
The Mayor of Newbury.  
The Mayor of Newcastle (Staffordshire).  
The Mayor of Newcastle-on-Tyne.  
The Mayor of Newport (Monmouth).  
The Mayor of Northampton.  
The Mayor of Norwich.  
The Mayor of Nottingham.  
The Mayor of Oldham.  
The Mayor of Oswestry.  
The Mayor of Oxford.  
The Provost of Paisley.  
The Mayor of Pembroke.  
The Mayor of Penzance.  
The Mayor of Peterborough.  
The Provost of Perth.  
The Mayor of Plymouth.  
The Mayor of Pontefract.  
The Mayor of Poole.  
The Mayor of Portsmouth.  
The Mayor of Preston.  
The Mayor of Reading.  
The Mayor of Regate.  
The Mayor of Reiford, East.  
The Mayor of Richmond (Yorkshire).  
The Mayor of Ripon.  
The Mayor of Rochester.  
The Mayor of Romsey, Hants.  
The Mayor of Rye.  
The Mayor of Saffron Walden.  
The Mayor of Salford.  
The Mayor of Salisbury.  
The Mayor of Sandwich.  
The Mayor of Scarborough.  
The Provost of Selkirk.  
The Mayor of Sheffield.  
The Mayor of Shrewsbury.

The Mayor of Southampton.  
The Mayor of South Molton.  
The Mayor of South Shields.  
The Mayor of Stafford.  
The Mayor of Stamford.  
The Mayor of St. Albans.  
The Mayor of St. Ives.  
The Provost of Stirling.  
The Mayor of Stockport.  
The Mayor of Stockton.  
The Mayor of Stratford-on-Avon.  
The Returning Officer of Stroud.  
The Mayor of Sudbury.  
The Mayor of Sunderland.  
The Mayor of Swansea.  
The Mayor of Tamworth.  
The Mayor of Taunton.  
The Mayor of Tewkesbury.  
The Mayor of Thetford.  
The Mayor of Tiverton.  
The Mayor of Torrington.  
The Mayor of Totnes.  
The Mayor of Truro.  
The Mayor of Tynemouth.  
The Mayor of Wakefield.  
The Mayor of Walsall.  
The Mayor of Wallingford.  
The Mayor of Wareham.  
The Mayor of Warrington.  
The Mayor of Warwick.  
The Mayor of Waterford.  
The Mayor of Wells.  
The Mayor of Wexford.  
The Mayor of Weymouth.  
The Mayor of Wigan.  
The Mayor of Winchester.  
The Mayor of Windsor.  
The Mayor of Wisbeach.  
The Mayor of Wolverhampton.  
The Mayor of Woodstock.  
The Mayor of Worcester.  
The Mayor of Yarmouth.  
The High Bailiff of Westminster.

Notice to  
Exhibitors  
of Musical  
Instruments.

#### NOTICE TO EXHIBITORS OF MUSICAL INSTRUMENTS.

1. Her Majesty's Commissioners reserve to themselves the right of giving recitals in public on the musical instruments selected for the Exhibition of 1872, if such recitals be deemed expedient in the interest of the public.
2. Such recitals will, when convenient, take place in the Royal Albert Hall, and the names of the manufacturers of instruments will be announced in the programmes and exhibited upon the orchestra.
3. Instruments which may not be used in the recitals given in the Hall may be tried without removal from their Exhibition allotments, subject to the approval of Her Majesty's Commissioners, and at the exhibitors' expense.

4. Any additional trials which exhibitors may desire to have carried out will be matters of arrangement, both as to their nature and cost, between Her Majesty's Commissioners and the exhibitors interested.

5. The recitals will include performances upon instruments accompanied and unaccompanied by other instruments.

HENRY Y. D. SCOTT, Major-General,  
November 1871. Secretary.

Notice to  
Exhibitors  
of Musical  
Instruments.

#### MUSICAL PUBLICATIONS.

1. The rules for the International Exhibition of 1872 provide as follows:—

#### MUSICAL ARRANGEMENTS.

Her Majesty's Commissioners will appoint a committee to select for performance in the Royal Albert Hall new compositions of merit which may have been published before the 1st March 1872.

2. Accordingly, Her Majesty's Commissioners are desirous of receiving from the musical academies and schools of the United Kingdom and of foreign countries the names of musical compositions of all kinds, which are considered by them of sufficient merit to be worthy of performance in the Royal Albert Hall during the International Exhibition of 1872.

3. The works should be the productions of living composers, published before the 1st March 1872, and may be of a vocal or instrumental character—such as oratorios, cantatas, sonatas, overtures, glees, songs, dance music, &c.

4. It is requested that the information may be supplied on the accompanying form, and the form returned, on or before the 31st March 1872, to Major-General H. Y. D. Scott, C.B., offices of the International Exhibition, Kensington Gore, London, W.

HENRY Y. D. SCOTT, Major-General,  
Secretary.

#### APPENDIX IX.

#### TECHNICAL INSTRUCTION.

##### TECHNICAL INSTRUCTION afforded by the LONDON INTERNATIONAL EXHIBITION.

Technical  
Instruction.

April 1873. No. 118.

1. Her Majesty's Commissioners are most desirous that the practical illustrations and processes of manufactures shown in each year's Exhibition should be made conducive to the advancement of Technical Instruction.

Technical  
Instruction.

2. Her Majesty's Commissioners venture to think that it comes within the especial functions of the Companies of the City of London, who for centuries have been connected with the advancement of Arts and Manufactures, to consider what useful lessons may be afforded by the Exhibitions and they invite their serious attention to the subject. Most if not all of the City Companies, are interested in education in various schools under their direction.

3. It is proposed to hold a meeting of representatives of all the City Companies in the Royal Albert Hall; to invite them to look at the Industrial Collections of the present year, and afterwards to form Committees representing each of the Companies interested.

4. The industries illustrated in the present year are:—

Silk in all its stages.

Steel in all its varieties and uses.

Carriages of all kinds except those for Railways.

Food and its preparations.

The City Companies interested in the Exhibition of 1873 appear to be as follows:—

*Silk.*

Broderers (embroiderers).  
Drapers.  
Dyers.  
Girdlers.  
Glovers.  
Haberdashers.  
Mercers.  
Weavers.

*Steel.*

Armourers and braziers.  
Barbers.  
Blacksmiths.  
Cutlers.  
Founders.  
Framework knitters.  
Ironmongers.  
Needlemakers.  
Spectacle makers.

*Carriages.*

Carmen.  
Carpenters.  
Clothworkers.  
Coach and coach harness makers.  
Joiners.  
Painters.  
Turners.  
Wheelwrights.

*Food.*

Brewers.  
Butchers.  
Cooks.  
Distillers.  
Fishmongers.  
Fruiterers.  
Gardeners.  
Grocers.  
Poulterers.  
Salters.  
Vintners.

30th April 1873.

## NATIONAL ASSOCIATION for the Promotion of TECHNICAL INSTRUCTION.

Technical  
Instruction.  
—

November 1873. No. 29.

I. Her Majesty's Commissioners desire to enlist the active assistance of all Industrial Corporations, Companies, Schools, and Producers, in a National Association, with the object of promoting Technical Instruction by systematically inducing Artizans and Schools to visit the International Exhibitions, where they may study the progress made in the Industrial Arts and the Object lessons in Technical Instruction afforded by the Exhibitions. With this view Her Majesty's Commissioners have resolved :—

II. To issue packets of 200 Artizans' Tickets, price 6*d.* each, or 400 School Tickets, price 3*d.* each, such tickets being for gratuitous distribution, the purchaser of every such packet to receive gratis, one annual transferable complimentary Season Ticket, and to be registered as a Member of the Association.

III. To issue packets of 120 Artizans' Tickets, price 6*d.* each, or 240 School Tickets, price 3*d.* each, such tickets being for gratuitous distribution, the purchaser of every such packet to receive gratis, a personal Season Ticket, not transferable, and to be registered as a Member of the Association.

IV. To issue Artizans' or School Tickets, for distribution only, in packets of 50 at 6*d.* and 3*d.* each, respectively.

V. The Artizans' and School Tickets will be available for use on Saturdays and Mondays in the months of August, September, and October, and arrangements will be made to give Object lessons as often as possible. School children must be accompanied by their teachers.

VI. Her Majesty's Commissioners will be glad to receive the names of Subscribers to the Association for the year 1874 as early as possible.

NOTE.—Transferable Season Tickets will be issued to the Members of this Association only, and the usual personal Season Tickets will be issued to the public at Two Guineas each.

## APPENDIX IXA.

## SCHOOL OF COOKERY.

The SCHOOL OF POPULAR COOKERY is situate on the GROUND FLOOR, between the EAST GALLERIES and the COLONIAL ANNEXE.

School of  
Cookery.  
—

March 1873. No. 86.

I. The object is to give Illustrations of Cooking Food in the best, simplest, and cheapest, ways, suitable for persons with incomes from 50*l.*

School of  
Cookery.

to 500*l.* a year. The utensils used are those which might be found in a house of 40*l.* a year rental.

2. The Lecture Room will only hold about 120 people, of which number not more than 70 can be accommodated with Reserved Seats.

3. The charge for Admission on Mondays, Tuesdays, and Saturdays, will be 6*d.*; on Wednesdays, Thursdays, and Fridays, 1*s.* Reserved Seats, extra on all days, 6*d.* Admission to the front row (which accommodates only 12 persons), with the privilege of Tasting while the Food is being Cooked, 1*s.* 6*d.* each. Verbal explanations of the processes will be given by Mr. Buckmaster.

4. Tickets must be purchased beforehand, and may be obtained of all the Attendants in the Exhibition.

5. Whilst the Tasting Room is not to be regarded as a general Refreshment Room, arrangements will be made to allow a limited number of persons, who register their names each day, to taste the Practical Illustrations of the Lessons in Cooking, at 2 o'clock and 6 o'clock. Tickets of Admission must be purchased beforehand, and may be obtained of all the Attendants.

6. Popular Dishes can be had at all times in the ordinary Refreshment Rooms conducted by Messrs. Spiers & Pond, at the South end of the Exhibition.

7. The subject of the Illustrations given each hour in each day will be duly advertised.

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## APPENDIX X.

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Resolutions of  
Foreign Com-  
missioners in  
1867.

The following MEMORANDUM was prepared and signed at PARIS before the close of the UNIVERSAL EXHIBITION, 1st November 1867.

The following Resolutions were passed by the Commissioners for Austria, Italy, Prussia, Russia, United States, and the United Kingdom, at the Paris Exhibition of 1867 :--

I. That as the usefulness of International Exhibitions does not depend on their size, but on their selectness and quality, so the tendency to increase the size of each succeeding Exhibition should be discouraged.

II. That it is desirable that future Exhibitions should be held in rotation in various capitals.

III. That the country inviting the Exhibition to be held should provide at its own risk a suitable building completely finished in all respects, provided with all conveniences for unloading and loading, and perhaps supplied with sufficient glass cases.

Resolutions of  
Foreign Com-  
missioners in  
1867.

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IV. That before any code of general regulations for the management of Exhibitions be promulgated, the Commissioners of each nation occupying a given amount of space be assembled to discuss them, each nation having one representative or an equal number of representatives, but that the country inviting the Exhibition should have a veto on the decisions and the power of limiting the extent of the Exhibition, and the number of classes to be shown.

V. That in order to promote the comparison of objects, the general principle of the arrangement be rather by classes than by nationalities.

VI. That no objects be removed out of the Exhibition for the purpose of sale, and that means be taken to prevent its becoming a fair or bazaar.

VII. That the number of classes adopted in the present Paris Exhibition be greatly increased in future Exhibitions.

VIII. That no prizes of any kind be awarded, but that reports on every class be made and signed by an international jury, which reports should be published during the Exhibition, and as soon as possible after the opening.

IX. That each country, for every class in which it has exhibitors, be free to send one reporter for each class.

(Signed)      HENRY COLE, Executive Commissioner  
                    for the United Kingdom.  
SCHAEFFER, Commissioner for Austria.  
HERZOG, Commissioner for Prussia.  
R. DE THAL, Commissioner for Russia.  
CHIAVARINI, Commissioner General  
d'Italie.  
N. M. BECKWITH, Commissioner General  
for the United States.\*

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## APPENDIX XI.

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### ARRANGEMENTS FOR THE USE OF THE ROYAL HORTICULTURAL GARDENS.

Arrangements  
with Royal  
Horticultural  
Society.

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MINUTES OF THE TWENTIETH MEETING OF THE EXPENSES COMMITTEE.  
8th November 1869.

A scheme prepared by a sub-committee of the Royal Horticultural Society for the use of their gardens by the Commissioners during the

\* Signed in order of seniority.

Arrangements with Royal Horticultural Society. continuance of the Annual International Exhibitions, and embodying the terms of arrangement which appeared to them to be just and satisfactory, having been submitted to the committee, it was resolved that the following terms should be submitted for adoption:—

*Terms of Arrangement.*

I.

The society to give to the Commissioners the permission to admit to the gardens all visitors to the proposed International Exhibitions, and the use of the northern arcades from the 1st April to 31st October; the Commissioners providing in lieu thereof for the use of the society a covered communication on the roofs of those structures, between the Orchard House entrance and the conservatory.

II.

All receipts for admission to the gardens or International Exhibitions from 1st May to 30th September, taken at the entrances, to be the property of the Commissioners, and out of such receipts the Commissioners to pay to the society 1*d.* out of each shilling so taken.

III.

The cost of bands for the horticultural shows and for the promenades during the five months of the International Exhibitions to be defrayed by the Commissioners.

IV.

Fellows of the society to have the privilege of purchasing season tickets for the International Exhibitions with a reduction of one guinea per ticket on the price charged to the public, one such season ticket to be obtainable for every two-guinea subscription paid to the society.

V.

Fellows of the society to have the privilege of purchasing tickets of admission for their friends to the horticultural shows and promenades at a lower price than is charged to the public at the doors, these tickets carrying with them the privilege of admission to the whole of the International Exhibitions. The whole proceeds of the sale of such tickets to the fellows of the society for the horticultural shows, and 1*d.* in the shilling on the tickets sold for the promenades, to be the property of the society.

VI.

Two days of the week, as at present, the price of admission to the exhibitions and gardens to the general public to be not less than 2*s.* 6*d.* For Horticultural Exhibition days the price of admission to be regulated by the Expenses Committee.

## VII.

Arrangements  
with Royal  
Horticultural  
Society.

It is understood that the Commissioners will finish the arcades, and make such improvements in the gardens as may be necessary to provide increased promenade space, now so much required.

## VIII.

The exclusive privilege of the use of such portions of the annexes, by the fellows, as are not required in carrying out the objects of the Commissioners, not to be interfered with.

*See Appendix XLVII., p. 173.*

## APPENDIX XII.

## CORRESPONDENCE WITH FRENCH COMMISSIONERS.

Corre-  
pondence with  
French Com-  
missioners.

*Observations of the French Commissioners on the Regulations.*

(12th May 1870.)

## NOTE POUR LES COMMISSIONNAIRES DE SA MAJESTÉ BRITANNIQUE.

Les Commissaires Français croient devoir soumettre à la Commission Britannique quelques observations au sujet de divers articles de Statuts généraux et des Règlements spéciaux applicables au Exposants Étrangers.

Ces articles sont les suivants :—

Statut. F. "Les produits seront groupés par classes, et non par nationalités, comme dans les Expositions Internationales précédentes." Cette rédaction laisse un certain doute dans l'esprit, car elle semble exprimer cette idée qu'il y aurait un mélange complet dans les nationalités. Telle n'a pas été, sans doute, la pensée de la Commission Britannique. Elle a voulu dire, à notre avis, qu'il n'en serait pas comme en 1862, où des espaces généraux étaient réservés aux divers pays, espaces dans lesquels tous le produits venaient se classer indistinctement, quelle que soit la série à laquelle ils se rapportaient. Dans le système actuel, chaque galerie, ou partie de galerie, si nous interprétons bien le règlement, serait réservée à une certaine nature de produits et les contiendrait tous, à quelque pays qu'ils appartiennent, en respectant toutefois les nationalités, c'est à dire avec réserve, dans chaque galerie, de l'espace suffisant pour chacun des pays prenant part à l'Exposition.

Statut. G. Après avoir prescrit que "les divers États constitueront " eux-mêmes leurs juges d'admission," l'article G ajoute, "les deux autres " tiers du total seront affectés aux produits du Royaume Uni et aux " produits envoyés directement de l'Étranger pour être soumis à la " décision des juges nommés à cet effet."

Corre-  
spondence with  
French Com-  
missioners.

Ici un nouveau doute s'élève. La Commission Britannique a-t-elle voulu dire que tout en invitant les gouvernements étrangers à former des Comités d'admission, elle invaliderait les décisions de ces Comités en établissant à Londres un Jury spécial, devant lequel se présenteraient les producteurs non admis par leurs nationaux? Cela ne paraît pas possible; car on ne trouverait nulle part des hommes éminents dans l'art et dans l'industrie qui consentiraient à accepter dans leurs pays une mission ainsi définie.

Cette observation a été la première qui ait été soulevée dans la Commission Française, et M. le Commissaire-Général a répondu qu'à son sens il ne pouvait y avoir qu'une interprétation; c'est à dire, que les produits ne pourraient être directement envoyés de l'Étranger pour être soumis à la décision du Jury Britannique que pour les pays qui n'auraient constitué ni Commission ni Comités d'admission. Cette interprétation résulte directement du reste, et d'une manière irréfutable, de la phrase: "*Les divers États constitueront eux-mêmes leurs juges d'admission;*" phrase parfaitement nette, et dont l'interprétation ne laisserait aucun doute sans les mots qui suivent et semblent en infirmer le sens primitif.

En dehors de ces deux observations sur les Statuts généraux les Commissaires Français demandent à en présenter quelques uns sur les Règlements spéciaux, et tout d'abord sur les Articles I. et VII. du règlement applicable aux Exposants Étrangers.

Ces articles portent que les Commissions Étrangères remettront entre les mains des employés de la Commission Britannique les produits déballés et prêts à être mis en place.

Cette disposition, contraire à tous les précédents, créerait de sérieuses difficultés en France, où le producteur tient à disposer lui-même ses produits. Les Commissaires Français demandent que les espaces réservés à leur pays leur soient remis pour en disposer comme il conviendra, sous la réserve d'une entente parfaite avec les Commissaires de S. M. Britannique, et tout en acceptant le concours matériel des agents subalternes de la Commission Anglaise qui leur est proposé.

L'Article II. du Règlement des Beaux Arts prescrit qu'aucun artiste ne peut exposer plus de deux œuvres du même genre. C'est une prescription sur laquelle les Commissaires Français, dans l'intérêt de l'œuvre générale, prennent la liberté d'appeler l'attention des Commissaires de S. M. Britannique.

Elle ne présente aucun avantage: l'expérience l'a démontré, et son principal inconvénient est de placer le mérite éminent sur le même pied que la médiocrité. Si la France n'avait pas renoncé à cette réglementation en 1867, elle n'eut pas pu montrer au public les collections entières des œuvres de Meissonnier et d'autres artistes d'un talent hors

ligne, et la vue de deux œuvres de huit ou dix artistes d'un mérite secondaire eut été pour les visiteurs de l'Exposition du Champ de Mars une très faible compensation. Ici encore des Comités d'admission, composés d'artistes et d'amateurs éminents, assureront le succès mieux que toute réglementation restrictive.

L'Article V. de la Céramique exprime le désir que les Exposants n'envoyent qu'un seul spécimen du même produit: et, "par exemple, une sous-coupe, une tasse, et un assiette d'un même service à thé." Les Commissaires Français demandent la permission d'affirmer que, dans ces conditions, le succès de l'Exposition en ce qui concerne la France serait fort compromis.

La Commission Britannique ne décerne pas de récompenses; quelle peut donc être l'attraction offerte aux producteurs pour les amener de l'Étranger aux Expositions Internationales qui commencent en 1871, si ce n'est le désir de se faire connaître, et, comme on dit vulgairement, de faire des affaires? S'il s'agit pour eux d'envoyer un ou deux spécimens dépareillés de leur fabrication, avec la certitude que cet envoi ne leur produira ni récompenses ni avantages pécuniaires, où sera leur mobile?

Il est indispensable, à notre avis, si l'on veut, comme nous le désirons vivement pour notre part, assurer le succès d'une œuvre qui ne sera pas sans difficultés, de ne pas commencer par lui opposer une réglementation d'une application difficile en pratique, pour ne pas dire impossible.

Nous demandons, en conséquence, que les Commissaires Français soient mis purement et simplement en possession des espaces qui seront alloués à leur pays, espaces dont ils disposeront avec le concours des Comités d'admission de la manière la plus avantageuse pour le succès de l'Exposition, afin de donner satisfaction aux intérêts des Exposants, tout en tenant compte des intentions et des désirs exprimés par la Commission Britannique.

Dans les conditions qu'ils proposent, et si les espaces qui leur seront alloués se trouvent en proportion avec la situation des arts et de l'industrie en France, les Commissaires Français répondent du succès en ce qui concerne leur pays.

Londres, Jeudi 12 Mai, 1870.

J. E. OZENNE.

E. DU SOMMERARD.

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CORRESPONDENCE with the FRENCH COMMISSIONERS on participating  
in the EXHIBITION of 1871.

French Commission, 52, Onslow Square, London,

SIR,

25th March 1871.

HER Majesty's Commissioners for the Exhibition of 1851 might have considered in the presence of the events which have taken place

Corre-  
spondence with  
French Com-  
missioners.

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during the last six months, and especially of the siege of Paris, that France would not be in a position to carry out her engagements to take an active part in the approaching International Exhibition. I have to request you to have the goodness to communicate to Her Majesty's Commissioners the two following letters, which prove how unfounded any such doubts would have been.

The first is a letter addressed to the French Minister of Commerce, President of the National Commission, by a large number of the most influential representatives of the Arts and Industrial Manufactures of France. The second letter is the Minister's reply.

From dispatches which I this day received, I am informed that the expedition of objects from the provinces will immediately take place, without waiting for those from Paris, which are to follow.

My colleague, M. Ozenne, and I have been led to believe, from the sympathy which has been so generally shown throughout to the French nation, that Her Majesty's Commissioners are prepared to take any measures towards the completion of the Exhibition.

I have, therefore, to propose, for the consideration of Her Majesty's Commissioners, the possibility of an invitation being addressed by them to possessors of works of art of French origin in this country to lend them temporarily for exhibition until circumstances permit the arrival from France of objects destined for the Exhibition. Should Her Majesty's Commissioners be pleased to accept my proposition, I trust that immediate measures may be taken to communicate the wishes of the French Commission to the British public.

I need not assure you that the objects which may be confided to the French Commission will be treated with the greatest possible care.

I have the honour to offer the expression of high esteem.

(Signed)      E. DU SOMMERARD,  
 Lieut.-Col. Scott, R.E.,      General Commissioner for France.  
 Secretary to Her Majesty's  
 Commissioners for 1851.

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*To the Minister of Commerce, President of the French Commission for  
 the London Exhibition.*

SIR,

Paris, 1st March 1871.

THE International Exhibition of London opens the 1st of May 1871. France, invited to this solemnity by Her Majesty's Commissioners under the Presidency of the Prince of Wales, took the engagement to participate in it; a Commission, presided over by the Minister of Commerce, was named at the same time, chosen from the most acknowledged authorities of the arts and industry in our country, and the French Executive Commissioners, Messrs. Ozenne and du Sommerard,

proceeded to London upon several occasions to organise the French Exhibition.

It seems to us superfluous, M. le Ministre, to call your attention to the advantages which the Exhibition affords this year for our arts, and for those branches of our industry which are to be represented upon this occasion.

The universal sympathy expressed by the British public is an assurance for us that these advantages will not be illusive. Besides, if our arms have been unsuccessful against numbers, it should be well understood abroad that France is not downcast—that she has not lost the rank which belongs to her in civilized Europe; and, even on the morrow of her reverses, that she is prepared to give signs of existence by showing the power of her productive resources. We therefore request you, sir, to have the goodness to decide, immediately peace is proclaimed, that all the preparations for this Exhibition should be actively proceeded with.

The most important works are already executed; it is only necessary to utilize them, and the time which remains previous to the opening will be sufficient for our Commissioners to arrange for the transmission of our objects and the arrangement of the French section. As to ourselves, we are prepared for every sacrifice to meet in a dignified manner the traditional reputation of our country in all the arts of peace and at the same time to respond to the benevolent sympathy which we are receiving from the British public and from Her Majesty's Commissioners.

We have the honour to be,

LEON COGNIET, Membre de l'Académie des Beaux-Arts.

CH. MARCHAL, Peintre d'Histoire.

MENE, Statuaire.

CAIN, Statuaire.

GUICHARD, Président de l'Union Centrale des Arts appliqués à l'Industrie.

BARBEDIENNE, Président de la Chambre Syndicale des Fabricants de Bronze.

CHRISTOFLE, Manufacturier.

GUERET, Sculpteur.

ROUDILLON, Meubles d'Art.

CH. ROSSIGNEUX, Dessinateur.

MAZAROS, Sculpteur.

ADOLPHE VEYRAT, Orfèvre.

LANNEAU, Sculpteur.

BIAIS, Fabricant de Broderies.

SAINT-SAENS, Compositeur de Musique, etc.

Corre-  
spondence with  
French Com-  
missioners.

*Letter of the Minister of Commerce to the Secretary-General of the Ministry.*

SIR, [redacted] Bordeaux, 9th March [1871].

YOU have transmitted to me a petition signed by a number of the most important manufacturers, asking that the French Government would maintain the engagements entered into with Great Britain for the International Exhibition, which is to be opened in London on the 1st of May next.

To this petition you have added a memorandum signed by you and M. du Sommerard as General Commissioners appointed for this Exhibition. I have brought this matter before the Council of Ministers. The Council have decided that it is expedient to carry out the engagements entered into in the name of the French nation in order that our manufacturers and artists might be in a position to present themselves at the London Exhibition with a view of proving that our nation, notwithstanding the painful events which it has been passing through, still preserves the rank which belongs to France.

Receive, &c.,  
LAMBRECHT,  
Minister of Agriculture and Commerce.

Buildings.

APPENDIX XIII.

(8th July 1869.)

REMARKS on the REVISED PLANS for the BUILDINGS of the PROPOSED INTERNATIONAL EXHIBITIONS OF SELECTED OBJECTS.

1. The buildings shown in the plans and drawings herewith laid before the Commissioners can be executed for the sum of 75,000*l.* in a permanent and substantial manner.
2. They are of a character and are so situated as to be useful for public purposes generally, without reference to international or any other special Exhibitions.
3. The buildings consist of upper and lower galleries to be erected on each side of the Horticultural Gardens. These galleries are 30 feet in width and from 22 to 30 feet high. From the upper galleries access is provided to the terrace roofs of the east or west arcades of the gardens, which would afford promenades to the visitors to the Exhibition.
4. The completion of the arcades in a permanent and satisfactory manner, such as is contemplated in the proposed plans, would under any

circumstances involve an outlay of 10,000*l.*, and the eastern arcades are now in a very dilapidated condition, and will occasion constant and heavy expense in repair.

Buildings.

5. The close proximity of the proposed buildings to the Horticultural Gardens and the Albert Hall will not only add to the attractiveness of the proposed Exhibitions, but will conduce to the success of all the institutions which the Commissioners have already established on their property.

6. The proposed plans leave the frontages of the annexes towards Exhibition and Albert Roads untouched, with a clear depth of 165 feet. The value of the annexes for building purposes, should it be necessary at any time to resort to their sale to raise funds, would not therefore be injured. What are termed "first-class houses" have rarely a depth exceeding one half of this.

7. The plans are in accord with the views for producing architectural and decorative effect (the original designs are herewith also submitted) which prevailed when the gardens were designed.

8. The erection of the proposed buildings will assert the right of the Commissioners to build upon the annexes, before the owners of the houses looking on the property have enjoyed this advantage sufficiently long to leave them any grounds for supposing that they are entitled to it.

(18th July 1870.)

GENERAL CONDITIONS FOR ALLOWING SUPPLEMENTARY GALLERIES TO BE <sup>Supplementary</sup> ~~Buildings.~~  
ERECTED ON THE VACANT GROUND ON THE EAST AND WEST SIDES  
OF THE ROYAL HORTICULTURAL GARDENS, SOUTH KENSINGTON,  
APPROVED BY THE FINANCE COMMITTEE.

1. Galleries, according to a design to be approved by Her Majesty's Commissioners, may be erected on behalf of both foreign and British exhibitors by the irrespective Commissions upon payment of a nominal rental.

2. Each Commission, whether foreign or British, may arrange to have an allotment of ground for such a Supplementary Gallery, proportionate to the space occupied by such Commission in the Select Exhibition.

3. These Supplementary Galleries are to be erected solely with the object of giving additional space to the exhibitors selected for admission into the Annual International Exhibitions, and are only to be used for the display of objects corresponding with those prescribed for each particular year.

4. Such Supplementary Galleries are only to be used by the respective Commissions during the period of each Annual International Exhibition, including the time required for the arrangement and removal of objects.

**Supplementary Buildings.** At other periods they are to be at the disposal of Her Majesty's Commissioners on terms to be arranged with each Commission.

5. The tenure of such galleries is to be for five or seven years, but terminable by Her Majesty's Commissioners after each year's exhibition, upon a payment proportionate to the unexpired term of each lease.

6. The Supplementary Galleries are to be kept in repair to the satisfaction of Her Majesty's Commissioners by the respective Commissions.

7. All other charges connected with the Supplementary Galleries are also to be defrayed by the several Commissions.

8. No object is to be removed from these galleries during the hours the Exhibition is open, and if objects are removed in the evening or early in the morning they must be replaced by similar objects before the Exhibition is again opened.

9. Every Commission having a Supplementary Gallery shall comply with the regulations of Her Majesty's Commissioners for the time being in force, in relation to the maintenance of the gallery and conduct of business therein. Any Commission making default in complying with such regulations shall, if required so to do by notice under the seal of Her Majesty's Commissioners, close such gallery until the default is remedied to the satisfaction of Her Majesty's Commissioners, and if the default be not remedied within a period, to be fixed by Her Majesty's Commissioners, of not less than one month, Her Majesty's Commissioners may either require the Commission in default to remove their gallery, or may themselves purchase the gallery at a price to be agreed upon, or in default of agreement to be settled by arbitration.

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## APPENDIX XIV.

**Sales of Objects.**

### RESOLUTIONS UPON SALES OF OBJECTS.

(16th Feb. 1872.)

Resolved that—

1. Her Majesty's Commissioners are desirous that persons engaged in the production of such articles as are comprised in the manufacturing division of each Exhibition should be associated with them in the selection of objects in that division.

2. Her Majesty's Commissioners consider that the exclusion of works of fine art from the Exhibition, by reason only that the material employed for them is not one of the classes for the year, is inadmissible.

3. Her Majesty's Commissioners do not agree with the deputation that either the interests of art, or those of the public, would have been injured by the proposed sales of manufactured objects, not in the Exhibition itself, but in the annexes, in accordance with conventions entered into with the French and Belgian Commissions. As, however, the French and Belgian Commissions have most liberally relinquished the rights accorded to them, Her Majesty's Commissioners, with the view to reconcile conflicting interests as far as possible, will adopt the rules, as respects sales, laid down for the Exhibitions of 1851 and 1862.

It was resolved that a copy of the foregoing resolutions should be forwarded to Mr. W. H. Smith, M.P., the President of the Trade Association, with a letter informing him that the delay in sending a reply to the deputation had been occasioned by the necessity of negotiating with the French and Belgian governments on the subject.

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## APPENDIX XV.

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### EXHIBITION OF POTTERY IN BERLIN.

Athenæum Club, Pall Mall,

Exhibition of  
Pottery in  
Berlin.

SIR, 18th July 1871.

HER Imperial and Royal Highness the Crown Princess of Germany, Princess Royal of Great Britain and Ireland, being fully aware of the great influence which special Exhibitions of objects of industry and arts exercise on taste, wishes very much that the collection of pottery which forms part of the International Exhibition at South Kensington should be transported to Berlin, and from there perhaps also to other Continental places, and exhibited there for a certain time. Her Imperial and Royal Highness would use her whole influence with the Governments of Prussia in order to facilitate the execution of this plan, if the Committee for the International Exhibition would be inclined to support it, and would indicate such steps as it might be found necessary to take. The Crown Princess therefore commands me to ask you whether the Committee would be inclined to approve of this plan, and whether it would take upon itself the trouble of favouring its execution. Her Imperial Highness believes that it would be advisable to exclude from the collection all duplicates, and leave only such objects as would be useful for an Exhibition of that kind. The question would then be, how many objects there would remain, on whom the expense of packing and

**Exhibition of Pottery in Berlin.** transport would fall, for how long a time the objects would be permitted to circulate, and when it would be possible to transmit them.

Would you kindly send your answer under my address to Coblenz, Rhenish Prussia.

I have the honour to be,  
Sir,

Your very obedient Servant,  
J. BRANDIS.

## REPORTS OF EXECUTIVE SUPERINTENDENTS.

## APPENDIX XVI.

### FINE ARTS OF ALL KINDS.

1871, 1872, 1873, 1874.

**Scope of the Exhibition.**

IN 1869 the Commissioners announced that the series of Annual International Exhibitions were to embrace selected works of *Fine* and Industrial Art and Scientific Inventions, and accordingly the preparations made for each of the Exhibitions of 1871, 1872, 1873, and 1874, were modified according as the experience of each year dictated. The first seven classes of all four Exhibitions were devoted to Division I., FINE ARTS, and remained unchanged. They were:—1. Paintings of all kinds. 2. Sculpture of all kinds. 3. Engravings, lithographs, photographs. 4. Architectural designs. 5. Embroideries, tapestries, and carpets. 6. Designs for decorative manufactures. 7. Reproductions of ancient works of Art.

**Modification of rules.**

The rules for forming the Fine Art Collections varied somewhat for each year. In 1871 all works, excepting reproductions, were to have been executed by living artists, or by artists deceased within *five* years. In 1872 it was decided that all works, excepting architectural works and reproductions of ancient works, should have been executed by living artists, or by artists deceased since 1862. In 1873 the same rule held good as in 1872, and in 1874 no definite limit was put on the age of works submitted.

**Principle of selecting and obtaining works.**

In order to ensure an adequate representation of the genius and skill of the artists of our own and foreign countries in each year's exhibition, the general principle was adopted of having with each work some guarantee of its fitness for exhibition. In the case of foreign countries the selection was left to the Commissioners appointed by different foreign governments; and in the case of works of British artists various committees were appointed each year to make a selection of works

qualified for exhibition. After the Exhibition of 1872 the Commissioners determined to establish relations with well established Art societies in countries not represented by government commissions, and accordingly I was deputed to visit Denmark, Holland, Germany, Italy, and Switzerland, with the object of negotiating with the various Art societies in those countries. It was determined to offer to return unsold paintings free of carriage, provided that societies and academies undertook the selection of works of Art, and accepted the responsibility of their worthiness. Relations were successfully established with Copenhagen, the Hague, Amsterdam, Munich, Dusseldorf, Baden, Venice, Bologna, Florence, Milan, Turin, and Geneva, and a large number of pictures, statues, and other works of Art were received from these places in 1873 and 1874.

Fine Arts in  
1871.

The east and west galleries were set apart for the exhibition of works of Fine Art, and were utilised in a slightly different manner in each year. An arrangement with France left two rooms, Nos. XVIII. and XVII. in the East Picture Gallery, at the disposition of her commission ; Belgium has in all four years occupied one of the rooms in the same gallery, and pictures of other foreign countries have been arranged on the east or west side, as the period of their reception rendered it possible. The works of British artists have always had a separate space assigned to them, and separate rooms were, in 1873 and 1874, reserved for the special collections of works of celebrated deceased British artists.

The two galleries on the east and west sides of the gardens afforded altogether 2,480 linear feet run of wall space for pictures ; but, as the circumstances of each year demanded, additional hanging space was found in the south galleries, in the Picture Gallery and crush rooms of the Royal Albert Hall, in the lower quadrants, and on screens which were placed in all parts of the building reserved for Fine Art.

In each year the organization of British Fine Art received careful attention. Her Majesty's Commissioners in 1871 appointed the three following committees for considering the mode of appointing committees of selection for works of Fine Art ; namely, painting, sculpture, and architecture :—

PAINTING.

The Viscount Bury, M.P.  
The Lord Elcho, M.P.  
Sir Coutts Lindsay, Bart.  
Alfred Elmore, Esq., R.A. (representing the Royal Academy).  
Alfred Clint, Esq. (representing the Society of British Artists).

Alfred Hunt, Esq. (representing the Society of Painters in Water Colours).

Henry Warren, Esq. (representing the Institute of Painters in Water Colours).

F. Dillon, Esq.

H. S. Marks, Esq., A.R.A.

Fine Arts in  
1871.

SCULPTURE.	ARCHITECTURE.	
The Viscount Bury, M.P.		Sir Coutts Lindsay, Bart.
The Lord Elcho, M.P.		Edward M. Barry, Esq., R.A. (representing the Royal Academy).
Sir Coutts Lindsay, Bart.		Joseph Clarke, Esq. (represent- ing the Royal Architectural Museum).
William C. Marshall, Esq., R.A. (representing the Royal Academy).		T. Roger Smith, Esq. (repre- senting the Architectural Association).
John Bell, Esq.		James Fergusson, Esq.
Richard Westmacott, Esq., R.A.		Professor Hayter Lewis.
		Alfred Waterhouse, Esq.

Subsequently committees for the actual selection of objects were appointed, and it became the practice to also ask their advice from time to time as to the best mode of procuring representative collections of paintings, sculpture, engravings, photographs, architectural designs, and works of miscellaneous Art.

The committees for the various classes held numerous meetings before the Exhibition of each year, but one or two sittings were generally found sufficient for making a selection of objects after the works had been submitted for exhibition.

It will be observed on referring to the lists of committees in the Appendix, p. 5, &c., that they consisted in each year of both artists and laymen, and that members representing the Royal Academy and other societies of artists accepted service on them from time to time.

#### RULES COMMON TO THE FINE ARTS OF ALL FOUR YEARS.

Rules common  
to all four  
years.

The *general* regulations for exhibiting objects of Fine Art remained unchanged for all four Exhibitions. Modifications were, however, made, which will be noticed in dealing with the separate classes. The decisions common to all the four years were as follows:—

I. Examples of Fine Art applied or not applied to works of utility will form part of each Exhibition of the series, and will be arranged in the following classes:—

- Class 1. Painting of all kinds; in oil, water colours, distemper, wax, enamel, and on glass, porcelain, mosaics, &c.
- ,, 2. Sculpture, modelling, carving, and chasing in marble, stone, wood, terra cotta, metal, ivory, glass, precious stones, and any other materials.
- ,, 3. Engraving, lithography, photography, &c.
- ,, 4. Architectural designs, drawings, and models.
- ,, 5. Tapestries, carpets, embroideries, shawls, lace, &c. shown not as manufactures but for the fine art of their design in form or colour.

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1871.

Class 6. Designs for all kinds of decorative manufactures.

„ 7. Copies of ancient or mediæval pictures, mosaics, enamels, reproductions in plaster, fictile ivory, electrotypes of ancient works of art, &c.

II. No artist can be allowed to submit more than two\* works of each kind for exhibition, but he may send works of as many different kinds as he pleases; thus, the same artist may send for admission two\* oil paintings, two\* water colour paintings, and two\* paintings on enamel, porcelain, &c.; also two\* sculptures in marble, two\* in wood, &c.

III. Paintings and sculptures may be either separate works or form part of the decoration of objects of utility, *e.g.*, vases in pottery, fans, panels for furniture, wood carving for furniture, &c., provided that such objects are entitled to be classed as works of Fine Art.

IV. A producer will be permitted to exhibit reproductions of any number of ancient or mediæval works of Art.

V. Each picture, drawing, or series of drawings relating to one subject, must be in a separate frame, except small miniatures or sculptured gems, any number of which may be placed in a frame not exceeding a foot square.†

VI. To every work when exhibited will be attached a label, for which the following particulars should be supplied:—

1. The subject.
2. The artist's name.
3. His address.
4. The price, if for sale, unless the exhibitor objects.
5. The date of execution. }‡
6. Any explanation. }‡

The most novel feature in the scheme for representing Fine Art at Miscellaneous Art. these annual exhibitions lay in the special attention directed to Art applied to works of utility. Hitherto the exhibitions of works of Art had been too much limited to the display of pictures and sculpture, dissociated from purposes of utility. A picture applied to a piece of furniture or a sculpture in wood intended for a picture frame, however great its merits, could not find any place in the exhibitions of the Royal Academy of London, or in any of the numerous other exhibitions of the works of artists. Still less would a Kashmir shawl or a Persian carpet, the chief excellence of which depended upon its combination of colours, find a place in any of these exhibitions.

Such a complete separation of artistic work from objects of utility may indeed be said to have been, until 1871, the characteristics of modern times; but in ancient and mediæval periods the highest art is to be found in alliance with the meanest materials of manufacture. The Etruscans painted on vases of clay subjects which still charm by

\* After 1871 the number was increased to three.

† After 1871 the size was limited to "Imperial" size.

‡ In 1874 this information was not requested.

Fine Arts in  
1871.

their beauty of composition and skilful drawing; and the finest works of Raffaelle were designed as decorations for hangings to be made of wool. The intention of the annual exhibitions was to furnish opportunities of stimulating the revival of the application of the artists' talents, to give beauty and refinement to every description of object of utility whether domestic or monumental. Another point, too, in this class of miscellaneous Art was that every artist workman should be able to exhibit a work of merit as his own production, and every manufacturer should distinguish himself as the patron of Art by his alliance with the artistic talent of the country.

In 1871 all works of Art were to have been by artists then living or by artists then deceased within five years. Paintings were received on the 27th and 28th of February. According to the catalogue the following countries contributed:—

Great Britain	-	-	-	-	1,306	Paintings.
France	-	-	-	-	456	
Belgium	-	-	-	-	126	
Germany	-	-	-	-	115	
Austria and Hungary	-	-	-	-	48	
Italy	-	-	-	-	34	
Portugal	-	-	-	-	1	
Norway and Sweden	-	-	-	-	27	
Denmark	-	-	-	-	5	
Holland	-	-	-	-	6	
Spain	-	-	-	-	2	
Russia	-	-	-	-	3	

British paintings were exhibited in Rooms VI., VIII., and X., in the west galleries, in the south-eastern and south galleries, and the picture gallery of the Royal Albert Hall. Pictures from France were shown in Rooms XIX. and XX. in the east galleries; Belgian works were in Room XVI. in the same galleries; Italian works were on the left side of Room XVIII. east galleries, and on the opposite side were arranged works from Germany, Austria, Hungary, Sweden, Denmark, Spain, and Portugal.

Two hundred and ninety-four pieces of sculpture were contributed by all countries and were arranged in the picture galleries and upper quadrants connecting them with the Royal Albert Hall. Mr. S. Redgrave, assisted by Mr. F. R. Sketchley, undertook the hanging of pictures and the placing of statues.

In the class of objects of miscellaneous Art, 946 objects are shown by the catalogue to have been contributed by all countries. In this class were decorative pieces of furniture, examples of wood carving and inlaid work, engraving on glass, artistic jewellery, plaques of finely-painted

Fine Arts in  
1871.

pottery, miniatures, metal work, enamels, embroideries, lace, tapestries, lacquer work, ivories and ebonies, and a special collection of fans, sent in competition for prizes offered by Her Majesty the Queen and other ladies for the encouragement of female artists. This collection of fans was under the superintendence of Lieut. Curling, R.E.

In Room XVII., east galleries, were exhibited a number of Reproductions of famous Indian, Italian, Spanish, Norwegian, and other works, made for or by the South Kensington Museum, and amongst them were some highly interesting objects, especially the last of the eastern gateway of the great Buddhist Tope at Sanchi, in Central India. This collection also contained electrotype facsimiles of mediæval works in metal. The collection and arrangement of the whole section of miscellaneous Art was intrusted to Mr. Alan S. Cole.

Engravings, lithography, and etchings were exhibited in the picture gallery of the Royal Albert Hall, and 247 specimens were entered in the official catalogue; their arrangement was under the direction of Mr. Clarke.

Photography was represented in the gallery of the Royal Albert Hall by 238 examples, which were arranged by Col. Stuart Wortley. Architectural designs were exhibited also in the Albert Hall gallery, and 212 specimens were arranged by Mr. G. Redgrave.

In 1871 OFFICIAL REPORTS were issued on each class of objects in Reports, both Fine Art and industrial divisions of the Exhibition, and the following gentlemen were reporters in the former:—

*Painting in Oil*; Sir Coutts Lindsay.

*Painting in Water Colours*; Mr. S. Redgrave.

*Sculpture*; Professor R. T. Westmacott.

*Miscellaneous Art*:

Painting; Sir D. Wyatt.

Sculpture; Mr. W. B. Scott.

Stained glass and mosaics; Mr. Gambier Parry.

Furniture, iron and metal working, tapestries and carpets; Mr. J. H. Pollen.

Design for decorative manufactures; Mr. R. Redgrave, R.A.

Lace; Mrs. H. Reeve.

Embroideries; Rev. Canon Rock.

Reproductions; Lieut. H. H. Cole, R.E.

*Engraving on wood*; Mr. J. Gullick.

*Engraving*; Mr. J. Marshall.

*Photography*; Colonel Stuart Wortley.

*Architectural designs*; Mr. T. Roger Smith.

In 1872 it was decided to exhibit works of Art that had been executed by living artists or by artists deceased since 1862; that the buildings to which the architectural drawings related should have been designed or

Fine Arts in  
1872.

Fine Arts in  
1872.

commenced since 1862, and that the drawings should not have been exhibited in any metropolitan Exhibition within a space of seven years or at any preceding exhibition. According to the catalogue the following countries contributed:—

Paintings.					
Great Britain	-	982	Austria and Hungary	34	
France	-	240	Spain	-	10
Belgium	-	123	Norway and Sweden	4	
Russia	-	113	Holland	-	3
Germany	-	80	Denmark	-	1
Italy	-	46			

This year the British pictures were hung wholly in the upper galleries and adjacent staircases on the western side of the Exhibition. Mr. O'Neil, A.R.A., and Mr. S. Redgrave performed the duty of hanging them. No pictures this year, as in 1871, were placed in the Royal Albert Hall.

French works were, as in 1871, arranged in Rooms XIX. and XX. on the east side. Belgium and Russia shared Room XVI. on the same side, and Room XVIII. was given up to pictures from Germany, Italy, and other foreign countries.

Two hundred and fifty-four pieces of sculpture were exhibited in the lower west and east quadrant (occupied this year for the first time), and in the picture galleries, under miscellaneous Art, 923 objects were catalogued and exhibited in Rooms VII. and IX. on the west side. A special collection of objects from China and Japan was placed in the court at the extremity of the east lower quadrant, and a number of interesting reproductions of ancient works of Art were arranged, as in 1871, in Room XVII., east galleries.

Sir Digby Wyatt, aided by Mr. A. S. Cole, arranged the miscellaneous Art objects. Engravings, photographs, and architectural designs were all arranged on screens in the lower east and west quadrants.

Mr. Herman hung some 157 engravings, lithographs, &c., Colonel Wortley some 249 photographs, and Mr. Roger Smith some 81 architectural designs.

No official reports were issued this year, but a short official guide took their place, and, without pronouncing on the merits of individual objects, indicated what the visitors would find interesting, and gave some general information on the subject of modern Fine Art.

Fine Arts in  
1873.

In 1873 several new features were introduced into the Fine Art division. In consequence of my official visit abroad, it had been arranged to establish relations with a number of countries not represented by government commissions, and to accept works of Art certified by academies or well established Art societies, and the result was that Germany, Italy, Denmark, Holland, and Switzerland were much better represented than had previously been the case.

Fine Arts in  
1873.

It had also been determined (a) to accept for exhibition sketches made by artists or amateurs, illustrating their travels ; (b), to make a selection of the works of distinguished artists recently deceased ; (c), that buildings to which architectural drawings, &c. related should have been designed or commenced since 1863.

It having been determined to represent the works of J. Phillip, R.A., and T. Creswick, R.A., an influential committee of the following noblemen and gentlemen was formed (*see Appendix II.*, p. 14), and their first meeting was held on the 10th of February 1873, at Marlborough House under the presidency of H.R.H. the Prince of Wales, when the following were present :—

Marquis of Westminster, K.G.	John Hick, Esq., M.P.
The Earl Fitzwilliam, K.G.	Thomas Johnson, Esq.
The Earl of Dunmore.	John Kelk, Esq.
Lord Ronald Leveson Gower.	W. Leaf, Esq.
Viscount Powerscourt.	C. Lucas, Esq.
Sir Richard Wallace, Bart., M.P.	T. Lucas, Esq.
Sir James Watts.	J. N. Mappin, Esq.
S. Addington, Esq.	Hugh Mason, Esq.
W. Agnew, Esq.	C. P. Matthews, Esq.
Captain W. Baldwin.	J. S. Morgan, Esq.
E. L. S. Benzon, Esq.	A. Morrison, Esq.
H. W. F. Bolckow, Esq., M.P.	George Paine, Esq.
A. H. Brown, Esq., M.P.	John Pender, Esq., M.P.
A. J. Brunton, Esq.	W. Quilter, Esq.
E. J. Coleman, Esq.	R. Rawlinson, Esq., C.B., F.G.S.
Alexander Collie, Esq.	Samuel Redgrave, Esq.
O. E. Coope, Esq.	James Reiss, Esq.
F. W. Cossens, Esq.	William Smith, Esq., F.S.A.
B. Dobree, Esq.	Francis M. Hampden Turner, Esq.
H. W. Eaton, Esq., M.P.	Charles Waring, Esq.
W. Fenton, Esq.	H. Waring, Esq.
Joshua Fielden, Esq., M.P.	W. Waring, Esq.
J. S. Forbes, Esq.	J. Kemp Welch, Esq.
John Fowler, Esq., C.E.	T. O. Barlow, Esq., A.R.A., <i>Executive.</i>
W. Graham, Esq., M.P.	
J. C. Harter, Esq.	
J. Snowdon Henry, Esq., M.P.	

Her Majesty the Queen having graciously promised to lend several works of J. Phillip, R.A., and T. Creswick, R.A., many other proprietors also liberally contributed to the collection of works representing the career of these distinguished artists.

The friends of and owners of pictures by the late Mrs. Carpenter, Mr. Mason, and Mr. Rankley, then but recently dead, also sent specimens of

Fine Arts in  
1873.

their works, which were hung together, and altogether the number of works by these well known deceased artists reached 371.

His Royal Highness the Duc de Nemours obligingly aided in supplying the void in the representation of French Art, occasioned by the International Exhibition at Vienna, by sending 16 pictures representing the visits of Queen Victoria and the Prince Consort to France in 1843, and of King Louis Philippe to England in 1844; and Sir Richard Wallace lent his unrivalled collection of works of Meissonier.

A special committee was formed to exhibit annually works of Fine Art executed by officers of the army and navy. His Royal Highness the Duke of Edinburgh acted as the Chairman. The members who formed the committee are named in the Appendix II., p. 15.

In 1873 the paintings contributed by various countries were as follows:—

Great Britain—	Modern paintings	-	748
	Works of deceased artists	-	371
	Sketches by artists	-	38
	Sketches by officers of the army and navy	-	312
Belgium	-	-	168
Germany	-	-	163
Italy	-	-	84
France	-	-	55*
Holland	-	-	36
Denmark	-	-	18
Switzerland	-	-	14
Austria	-	-	10
Russia	-	-	6
Norway and Sweden	-	-	6
Spain and Portugal	-	-	5

British paintings were hung in Rooms VIII., IX., X., west gallery, Rooms XVI., XVII., and XVIII., east gallery. Rooms VI. and VII., west gallery, contained German, Italian, French, and Dutch works, whilst Room XX. on the east side was filled with works principally from Belgium.

An attempt was made this year to group sculpture together, as suggested by the sculptors, and the greater number of statues were brought together in Room XVIII., west gallery. 216 objects were catalogued in this class. Miscellaneous Art had 471 entries in the catalogue, and the objects were for the most part arranged in Rooms XVII. and XIX., east gallery. 399 engravings, 145 photographs, and 60 architectural designs were hung in the gallery of the Royal Albert Hall.

\* The French Commission was not engaged at the Exhibition of 1873.

In this gallery was shown a full-sized photographic reproduction of Fine Arts in  
famous Bayeau tapestry ; it measured 260 feet 4 inches in length, and 1873.  
was 19 $\frac{3}{5}$  inches wide.

For the Exhibition of 1874 the Fine Art rules did not materially Fine Arts in  
differ from those of the preceding year. It was decided to represent the 1874.  
works of the following deceased British artists :—

John Constable, R.A.	-	-	-	died 1837
Augustus Egg, R.A.	-	-	-	” 1863
David Roberts, R.A.	-	-	-	” 1864
David Wilkie, R.A.	-	-	-	” 1841
J. Coney	-	-	-	” 1833
J. S. Cotman	-	-	-	” 1842
F. Mackenzie	-	-	-	” 1845
S. Prout	-	-	-	” 1852
A. Pugin	-	-	-	” 1832
C. Wild	-	-	-	” 1835

Of these artists 312 works were contributed by private owners, and  
were arranged in Room VI. 513 modern British paintings were hung  
in Rooms VIII., IX., and south-western staircase.

The following foreign countries contributed paintings :—

France	-	-	365	Russia	-	-	45
Belgium	-	-	473	Austria	-	-	26
Germany	-	-	274	Denmark	-	-	7
Italy	-	-	81	Norway and Sweden	-	-	16
Holland	-	-	68	Switzerland	-	-	1

France occupied Rooms XX. and XIX. ; Belgium filled Room XIV. ;  
and Bavaria filled Room X., west gallery. 223 objects of sculpture were  
arranged in all parts of the building. 713 examples of Miscellaneous  
Art were shown in Rooms VII. and IX. ; and 394 engravings, 199 photo-  
graphs, and 200 architectural designs were exhibited on screens in the  
crush rooms of the Royal Albert Hall.

H. H. COLE, Lieut. R.E.

## APPENDIX XVII.

Pottery, 1871.

## POTTERY. Class VIII., 1871.

The Committee consisted of the following:—

C. Magniac, Esq., Chairman.  
 The Countess of Warwick.  
 Lady Lindsay.  
 Mrs. Higford Burr.  
 The Earl of Lichfield.

C. M. Campbell, Esq., M.P  
 C. Drury Fortnum, Esq.  
 M. D. Hollins, Esq.  
 G. Howard, Esq.  
 A. Morrison, Esq.

## REPORTERS.

C. Drury Fortnum, Esq.  
 C. Magniac, Esq.  
 R. H. Soden Smith, Esq.  
 L. Arnoux, Esq.

G. Redgrave, Esq.  
 Lieut. Davies, R.E.  
 Lieut. Grover, R.E.

The Committee being appointed solely for the purpose of selection did not meet until after the goods had been received, and all preliminary arrangements for an adequate representation of this class of manufacture were undertaken by the executive of H.M.'s Commissioners. The Chamber of Commerce of Stoke-upon-Trent were consulted on the matter as early as November 1869, and, through their president, made various suggestions regarding the general rules for this class. On 4th July 1870, the chamber convened a meeting at Stoke, at which the leading manufacturers were present and which Mr. Henry Cole attended. The majority of the meeting were in favour of the Exhibition and pledged themselves to assist it. The rules and forms of application having been issued to the trade throughout the kingdom, and having been generally responded to, it scarcely appeared necessary to take any further steps towards collecting the Exhibition, as far as British and Irish manufactures were concerned. But it was thought possible that there might exist in some of the English counties, potteries but little known, the owners of which manufactured objects perhaps entirely for local use, but which might yet be worthy of being brought before the public. The lord lieutenants of counties were therefore requested to ascertain if any such potteries existed, and though the replies in most cases were in the negative, the inquiries thus set on foot led to an interesting display of pottery in common domestic use in Scotland, Wales, and some few English counties. Meanwhile, Captain (now Major) Martin, R.E., was sent to Prussia and Saxony to endeavour to induce the manufacturers of those countries to come forward, and H.M.'s Commissioners sanctioned the

purchase of representative collections of the manufactures of various other Pottery, 1871. countries.

The following special regulations were issued :—

I. Pottery of all kinds will be exhibited, viz., earthenware, stoneware, porcelain, parian, &c., including terra-cottas used in building, with new raw materials, machinery, and processes for the preparation of such manufactures.

II. In this Class the following trades, together with any others engaged in the production of pottery, may submit specimens of their respective branches of production :—

Brick and tile makers.  
Brown stone potters.  
Chemical potters.  
Chimney top manufacturers.  
China and earthenware manufacturers.  
China gilders.  
China menders.  
China rivetters.  
China and porcelain door furniture makers.  
China and porcelain manufacturers.  
China drillers.  
China figure manufacturers.  
China ornament makers.  
China painters and gilders.  
China toy makers.  
Drain pipe and tile makers.  
Earthenware figure manufacturers.  
Earthenware manufacturers.  
Egyptian black-ware manufacturers.  
Encaustic tile makers.

Fancy jug manufacturers.  
Fire brick makers.  
Jug manufacturers.  
Melting pot and crucible makers.  
Muffle manufacturers.  
Parian manufacturers.  
Plumbers' pottery makers.  
Porcelain letter makers.  
Porcelain manufacturers.  
Potters.  
Potters' engravers.  
Rockingham ware manufacturers.  
Stone bottle makers.  
Stone mortar and pestle manufacturers.  
Stone potters.  
Stone ware manufacturers.  
Terra-cotta manufacturers.  
Tobacco pipe makers.  
Vase manufacturers.

III. A producer in each of the trades may submit a specimen of each kind of object he manufactures, although such specimen may form only a part of a complete set.

#### NEW MATERIALS FOR POTTERY.

IV. Newly discovered materials used in the production of pottery, and new combinations of old materials may be exhibited.

V. Persons engaged in the following trades, or any other trades in the United Kingdom connected with the preparation of the materials used in the manufacture of pottery, may submit specimens of their productions :—

Ash merchants.  
Chert stone dealers.  
China clay merchants.  
Clay merchants.  
Flint millers.

Manganese merchants.  
Marble clay merchants.  
Pipe clay manufacturers and merchants.  
Zaffres refiners.

#### NEW MACHINERY FOR POTTERY.

VI. New machinery and apparatus will be admitted, and recent inventions relating to the different parts of the various machines and appliances used in the manufacture of pottery may be shown either as complete machines, or separately in parts. Machinery in motion and new processes of manufacture may be shown.

**Pottery, 1871.** VII. Persons engaged in the following, and other trades in the United Kingdom connected with the manufacture of pottery, may submit specimens of their productions:—

Brick and tile machine makers.	Kiln builders.
Brick makers' implement manufacturers.	Machinists in general.
Brick mould makers.	Pug mill makers.
Grinding mill makers.	Potters' wheel makers.

The reception of exhibits commenced on the 10th February, and shortly after that date the Committee held their first meeting. Some little difficulty was experienced in the selection of even the finer descriptions of pottery, and as regards that for architectural and sanitary purposes the Committee found themselves unable to do more, as a rule, than to order the rejection of duplicates and to allow all other objects to remain for exhibition. When it is remembered that the articles originally submitted for exhibition in this class numbered more than ten thousand, it must be admitted that the task before the Committee was a sufficiently arduous one; and the approval which the public afterwards bestowed on this class is sufficient proof that, arduous as the task was, the Committee had performed it well and thoroughly.

The number of exhibitors was 166, the numbers from each nation being shown below:—

Algeria	-	-	-	-	1
Austria	-	-	-	-	7
Belgium	-	-	-	-	8
Denmark	-	-	-	-	4
Egypt	-	-	-	-	1
France	-	-	-	-	3
Hungary	-	-	-	-	2
India	-	-	-	-	1
Italy	-	-	-	-	2
Japan	-	-	-	-	2
Morocco	-	-	-	-	1
Portugal	-	-	-	-	1
Prussia	-	-	-	-	3
Russia	-	-	-	-	2
Spain	-	-	-	-	2
Sweden	-	-	-	-	4
United Kingdom	-	-	-	-	122
 Total	-	-	-	-	 166

France and India showed the bulk of their exhibits in this class in their respective annexes.

The class was arranged under the direction of Mr. T. Clack of the Pottery, 1871. Science and Art Department. It was, as far as possible, classified under different heads, but this mode of arrangement met with considerable opposition from the exhibitors and was not completely carried out. All the finer manufactures were shown in the main ground floor galleries of the east buildings. Architectural and sanitary pottery (including tiles) was arranged in the eastern arcade and quadrant.

At the termination of the Exhibition in October 1871, a great part of the collection was transferred to Berlin for exhibition, at the special request of H.I.H. the Crown Princess of Germany. (See Appendix XV., p. 87.)

E. G. CLAYTON, Capt. R.E.

## APPENDIX XVIII.

### WOOLLENS AND WORSTED. Class IX., 1871.

Woollens and  
Worsted,  
1871.

#### COMMITTEE.

S. Addington, Esq.  
Jacob Behrens, Esq., M.P.  
J. Brinton, Esq.  
John P. Bull, Esq.  
W. H. Clabburn, Esq.  
J. G. Crace, Esq.  
Peter Graham, Esq.  
John Holmes, Esq.  
Owen Jones, Esq.

H. L. Lapworth, Esq.  
G. Leach, Esq.  
S. S. Marling, Esq., M.P.  
S. Morley, Esq., M.P.  
H. A. Ridgway, Esq.  
H. W. Ripley, Esq.  
W. Roberts, Esq.  
H. S. Way, Esq.

The following special regulations were issued:—

I. Woollen and worsted fabrics of all kinds will be exhibited with the raw material and machinery for manufactures in the same.

II. Producers engaged in the various trades, such as the following, connected with the manufacture of woollen and worsted fabrics may submit specimens of the particular work in which they are engaged, although they do not form complete objects. Thus, a beaver-cutter may exhibit beaver-cutting; a pulp cloth manufacturer may exhibit specimens of pulp cloth; a yarn manufacturer, yarn, &c.

#### a. WOOLLEN TRADES.

Army cloth manufacturers.	Calenderers.
Baize manufacturers.	Cloth drawers.
Beaver cutters.	Cloth dressers.
Billiard table cloth manufacturers.	Cloth embossers.
Blackwell Hall factors.	Cloth factors and merchants.
Blanket manufacturers.	Cloth finishers.
Blanket yarn spinners.	Cloth frizzers.

Woollets and  
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Cloth fullers.  
Cloth manufacturers.  
Cloth millers.  
Cloth printers.  
Cloth waterproofers.  
Cloth workers.  
Cold pressers.  
Collar cloth makers.  
Doeskin manufacturers.  
Domett manufacturers.  
Drugget manufacturers.  
Drugget printers.  
Dyers and scourers.  
Felt makers.  
Felt printers.  
Fent dealers.  
Flannel agents.  
Flannel factors.  
Flannel manufacturers.  
Flannel printers.  
Flock manufacturers.  
Flushing manufacturers.  
Frieze manufacturers.  
Fulling millers.  
Horse cloth manufacturers.  
Hot pressers.  
Ironing cloth manufacturers.  
Kersey manufacturers.  
Listing dealers.  
Machine cloth manufacturers.  
Mantle cloth manufacturers.  
Mourning hat band makers.  
Mungo merchants.  
Navy clothiers.  
Painted baize makers.  
Pianoforte hammer and damper cloth manufacturers.  
Plainback manufacturers.

Printers' blanket manufacturers.  
Pulp cloth manufacturers.  
Railway wrapper manufacturers.  
Regatta manufacturers.  
Roller clearer and ironing cloth manufacturers.  
Saddle cloth makers.  
Scribbling millers.  
Shag manufacturers.  
Ship felt makers.  
Shoddy manufacturers.  
Table cover manufacturers.  
Tweed manufacturers.  
Upholsterers' woollen manufacturers.  
Vesting manufacturers.  
Wool carders.  
Wool sheet manufacturers.  
Woolen agents.  
Woolen carpet manufacturers.  
Woolen carpet yarn manufacturers.  
Woolen cashmere manufacturers.  
Woolen cloth manufacturers.  
Woolen cloth waterproofers.  
Woolen dyers.  
Woolen factors.  
Woolen flock manufacturers.  
Woolen flushing manufacturers.  
Woolen listing manufacturers.  
Woolen manufacturers.  
Woolen rug manufacturers.  
Woolen spinners.  
Woolen stripes manufacturers (Spanish).  
Woolen tweed manufacturers.  
Woolen waistcoating manufacturers.  
Woolen waste dealers.  
Woolen weavers.  
Yarn manufacturers.

*b. WORSTED TRADES.*

Alpaca manufacturers.  
Alpaca spinners.  
Band and galloon makers.  
Bell rope makers.  
Berlin wool manufacturers.  
Bombasin manufacturers.  
Braid makers.  
Bunting manufacturers.  
Carpet manufacturers.  
Carpet pattern designers.  
Carpet plannars.  
Carpet weavers.  
Carpet yarn manufacturers.  
Cashmere manufacturers.  
Cashmere manufacturers.  
Challis manufacturers.  
Chenille manufacturers.  
Coach lace manufacturers.  
Coach trimmers.  
Coach upholstery and trimming manufacturers.  
Damask manufacturers.  
Embroiderers.  
Embroidery designers.  
Fringe and lace makers.  
Galloon and double makers.  
Girth web manufacturers.  
Hearthrug makers.  
Lamb's wool manufacturers.

Lasting manufacturers.  
Lindsey manufacturers.  
Livery lace makers.  
Machine combers.  
Merino manufacturers.  
Merino spinners.  
Military embroiderers.  
Military sash makers.  
Mohair manufacturers.  
Moreen makers.  
Mouseline de laine manufacturers.  
Plush manufacturers.  
Poplin manufacturers.  
Railway woven badge manufacturers.  
Rug manufacturers.  
Sateen manufacturers.  
Serge manufacturers.  
Shalloon manufacturers.  
Shawl border and fringe manufacturers.  
Shawl cleaners.  
Shawl darners.  
Shawl manufacturers.  
Stuff finishers.  
Stuff manufacturers and agents.  
Tassel manufacturers.  
Trimming manufacturers.  
Upholsterers' trimming manufacturers.  
Waistcoating manufacturers.  
Web and webbing manufacturers.

Wool combers.  
Woollen cord manufacturers.  
Worsted dyers.  
Worsted manufacturers.  
Worsted spinners.

Worsted stuff manufacturers.  
Worsted table-cover manufacturers.  
Worsted waste dealers.  
Yarn manufacturers.

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## NOT CLASSIFIED.

Machine habit manufacturers.  
Stripes manufacturers.

Zebra dress manufacturers.

## NEW MATERIALS FOR WOOLLEN AND WORSTED FABRICS.

III. Wool and hair of various kinds not hitherto used in the manufacture of textile fabrics, and materials newly applied to the cleansing, preparation, and dyeing thereof, may be exhibited.

IV. Producers in the United Kingdom, such as the following, engaged in the preparation of the materials used in the manufacture of woollen and worsted fabrics, may submit specimens of them :—

Alkali manufacturers.  
Alpaca wool merchants.  
Alum manufacturers.  
Ammonia manufacturers.  
Annato manufacturers.  
Aquaforthia makers.  
Arsenic manufacturers.  
Bichromate of potash manufacturers.  
Bleaching liquid makers.  
Bleaching powder makers.  
Blue manufacturers.  
Blue verditer makers.  
Borax manufacturers.  
Camel hair merchants.  
Carmine makers.  
Chemical colour makers.  
Chloride manufacturers.  
Cobalt refiners.  
Colourers.  
Colour manufacturers.  
Copperas manufacturers.  
Creosote manufacturers.  
Cudbear makers.  
Dye manufacturers.  
Dyewood cutters and raspers.  
Fellmongers.  
Flavine manufacturers.  
Garacine manufacturers.  
Goat's hair merchants.  
Indigo blue manufacturers.  
Indigo extract manufacturers.  
Indigo refiners.  
Manganese merchants.

Merino wool merchants.  
Methylated spirit manufacturers.  
Mecklenburgh blue makers.  
Mohair merchants.  
Mordant makers.  
Oehre manufacturers.  
Oil merchants.  
Orchil manufacturers.  
Oxalic acid manufacturers.  
Scarlet spirit manufacturers.  
Smalt manufacturers.  
Soap manufacturers.  
Soda ash makers.  
Soda crystal manufacturers.  
Soda merchants.  
Spirits of salt manufacturers.  
Sulphate of ammonia manufacturers.  
Sulphate of barytes manufacturers.  
Sulphate of copper manufacturers.  
Sulphate of soda manufacturers.  
Sulphur manufacturers.  
Turpentine distillers.  
Ultramarine manufacturers.  
Vitriol manufacturers.  
Washing compound makers.  
Washing crystal manufacturers.  
Woad manufacturers.  
Wool factors.  
Wool growers.  
Wool merchants.  
Wool staplers.  
Yellow spirit manufacturers.  
Zaffres refiners.

## NEW MACHINERY FOR WOOLLEN AND WORSTED FABRICS.

V. New machinery and apparatus used in the cleansing, preparation, and weaving of wool and hair, will be admitted, and improvements of the different parts of the various machines and appliances now in use may be shown separately.

VI. Manufacturers, such as the following, engaged in the production of

Woollens and  
Worsted, 1871.

machinery and apparatus used in the manufacture of woollen and worsted fabrics may exhibit under this head.	Reed and slay makers. Shuttle makers. Shuttle tip makers. Spindle makers. Spinner flyer makers. Spool makers. Tassel and fringe mould turners. Teazle rod manufacturers. Weavers' harness makers and enterers. Weavers' joiners. Weavers' leash makers. Weavers' loom makers. Weavers' mail makers. Weavers' turners. Winding frame makers. Wool burring machine makers. Wool card makers. Wool comb makers. Wool drying machine makers. Wool scouring machine makers. Woollen card makers. Woollen machine makers. Woolley teeth makers. Worsted machinery makers.
Bobbin manufacturers.	
Bobbin turners.	
Card leather curriers.	
Card machine makers.	
Card makers.	
Card teeth makers.	
Cloth press makers.	
Combing machine makers.	
Flyer makers.	
Fork manufacturers (weft).	
Gear and slay makers.	
Hackle and gill pin manufacturers.	
Hackle makers.	
Heald and slay makers.	
Heddle makers.	
Hot press makers.	
Jacquard card cutters.	
Jacquard harness mounters.	
Jacquard machine makers.	
Loom makers.	
Loom mounters.	
Loom passers and twisters.	
Machine joiners.	
Machine makers.	
Mule makers.	

A small collection of animals whose wools are used in the woollen and worsted manufactures was formed with the kind assistance of the Zoological Society, the Royal Agricultural Society, H.R.H. the Duke of Edinburgh, the Baroness Burdett-Coutts, and others; and the animals were housed in commodious sheds, with pens, erected near the north-west entrance from Prince Albert's Road.

The collection comprised specimens of the three distinct varieties of English sheep—long-woolled, short-woolled, and intermediate-woolled—viz., Lincoln, Cotswold, Oxfordshire Down, and pure Dorset; also pure Merinos, Indian, and Sardinian sheep, Cashmere shawl goats, llamas, alpacas, &c. Although these animals remained with their full fleeces at the Exhibition during the whole of its continuance (six months) throughout the summer, they were kept in perfect health, with the exception of one casualty, traceable to natural causes.

In the No. 1 gallery, close to this collection of wool-growing animals, were displayed stuffed specimens of the small Shetland sheep, fleeces and skins, with the different qualities of wool partitioned by red paint to show the various qualities selected by fellmongers, in the woollen trade, yarns, &c.

The woollen and worsted fabrics were, for the chief part, exhibited in the four so-called "crush rooms" of the Royal Albert Hall, at its southern end.

In addition to the contributions of private manufacturers, the Chambers of Commerce of Bradford, Huddersfield, Brünn, Wakefield, Leeds, Stroud, Rochdale, &c., the War Department, Usseröd Royal Army Cloth Manu-

factory, and similar institutions exhibited specimens of their goods; and the Royal Commissioners completed the collection by small purchases of representative fabrics from Italy, Bavaria, Switzerland, Hungary, Holland, Russia, Saxony, Morocco, &c.

Woollens and  
Worsteds,  
1871.

For economy of space these fabrics were, as a rule, exhibited upon specially made revolving frames, constructed after Mr. Cole's well-known design of hinged frames upon a central revolving axis (as used so generally at the South Kensington Museum). Such frames permitted the display of an extraordinary area of fabrics, compared with the ground space occupied thereby.

Yet wall space was invariably utilised for the exhibition of such woollen and worsted fabrics as could be properly shown upon them; and on the flat west walls of the pottery galleries (Nos. 11, 12, 13, 14, and 15 rooms), were suspended carpets and rugs of designs not incongruous with the general colouring of the galeries.

G. E. GROVER, Captain R.E.

Staff College, 25th February 1875.

## APPENDIX XIX.

### EDUCATIONAL WORKS AND APPLIANCES. Class X., 1871.

Educational  
Works and  
Appliances,  
1871.

The various committees for this class were appointed by the Society of Arts, which body from an early period had taken a very special interest in this branch of the Exhibition of 1871. The names of numerous persons acting on these committees are given in the Appendix II., p. 6. The committees as in other classes were appointed for selection only, but the Society of Arts assisted H.M.'s Commissioners in various ways, and particularly in the preparation of the rules for exhibitors. The class was divided into five sections:—

- a. School buildings, fittings, furniture, &c.
- b. Books, maps, globes, instruments, &c.
- c. Appliances for physical training, including toys and games.
- d. Specimens and illustrations of modes of teaching Fine Art, natural history, and physical science.
- e. Specimens of school-work, serving as examples of the results of teaching.

As regards the first four sections, little preliminary action was required beyond making the exhibition known to the various trades concerned by means of circulars.

Educational  
Works and  
Appliances,  
1871.

The trades were invited to exhibit under this head, such as:—

*a. SCHOOL BUILDINGS, FITTINGS, AND FURNITURE.*

Abacus frame makers.  
Black board makers.  
Diagram stand makers.  
Easel makers.  
Ink well makers.  
Object lesson cabinet makers.  
Reading frame makers.

School apparatus makers.  
School building model makers.  
School clock makers.  
School desk makers.  
School fitting makers.  
School form makers.

*b. BOOKS, MAPS, GLOBES, INSTRUMENTS, &c.*

Chart sellers.  
Copy book publishers.  
Globe makers.  
Ink powder makers.  
Inkstand makers.  
Map and chart sellers and publishers.  
Map and print colourers.  
Map engravers.  
Map mounters.  
Map printers.  
Mathematical instrument makers.  
Music copyists.

Music engravers.  
Pen makers.  
Pencil makers.  
Penholder makers.  
Publishers.  
Quill and pen manufacturers.  
Raised map makers.  
School slate makers.  
Slate pencil makers.  
Steel pen manufacturers.  
Topographers.  
Writing ink makers.

*c. APPLIANCES FOR PHYSICAL TRAINING, INCLUDING TOYS AND GAMES.*

Archery tackle makers.  
Backgammon board makers.  
Ball and balloon makers.  
Bowstring makers.  
Bicycle makers.  
Chess board makers.  
Cricket bat, ball, and stump makers.  
Croquet manufacturers.  
Dissected map makers.  
Doll makers.  
Fishing tackle makers.  
Foot ball manufacturers.  
Gilt toy makers.

Glass toy makers.  
Gymnasium makers.  
Hoop makers.  
Map disectors.  
Marble manufacturers.  
Pedometer makers.  
Puzzle makers.  
Rocking horse makers.  
Skate makers.  
Skittle makers.  
Target makers.  
Top makers.  
Toy makers.

*d. SPECIMENS AND ILLUSTRATIONS OF THE MODES OF TEACHING FINE ART, NATURAL HISTORY, AND PHYSICAL SCIENCE.*

Anatomical figure makers.  
Aquarium makers.  
Artists' colourmen.  
Barometer makers.  
Bird and beast stuffers.  
Black lead pencil makers.  
Botanical collectors.  
Camel hair pencil makers.  
Chemical apparatus makers.  
Coloured saucer makers.  
Crayon makers.  
Drawing board makers.  
Drawing instrument makers.  
Drawing model makers.  
Electric apparatus manufacturers.  
Fossil dealers.  
Galvanic apparatus manufacturers.  
Geological collectors.  
Magic lantern makers.  
Magnet makers.

Makers of musical instruments for schools.  
Mechanical figure makers.  
Microscope makers.  
Mineralogists.  
Naturalists.  
Nautical instrument makers.  
Optical instrument makers.  
Orrery and Tellurian makers.  
Philosophical instrument makers.  
Pink saucer makers.  
Plaster cast figure makers.  
Preparers of botanical specimens.  
Preparers of microscopic objects.  
Stereoscope makers.  
Sun dial makers.  
Telegraph instrument makers.  
Telescope makers.  
Thermometer makers.  
Ward's case makers.  
Zoological artists.

In order to obtain a useful representation of section *e*, it seemed necessary to make peculiar efforts. The novelty of the idea of exhibiting specimens of schoolwork was so great as to lead many heads of schools to believe that it was not practicable, or at any rate would be of little practical use, and the objections raised on these grounds alone to the scheme of the Commissioners were by no means few. The section was divided for convenience into the following sub-sections:—

- α. Writing.
- β. Drawing and design.
- γ. Modelling in clay, terra-cotta, wax, &c.
- δ. Models of machinery, building construction, &c.
- ε. Needlework.
- ζ. Miscellaneous works by pupils in schools for the blind, reformatories, &c.

The Education Department at Whitehall, and the National Education Office in Dublin were among the first to which application was made for assistance, then followed H.M.'s inspectors of schools throughout the kingdom, science schools, mechanics' institutes, and Schools of Art. The inspectors of schools were for the most part too much engaged with their ordinary official duties to be able to make collections (as they were requested) of specimens of school-work in their respective districts, but they furnished H.M.'s Commissioners with lists of such schools as would be most likely to contribute, and by answering the queries of masters and in other ways they materially furthered the object which H.M.'s Commissioners had in view. The British and Foreign School Society were also of great assistance, and numerous private gentlemen who interested themselves in the instruction of the blind, and of the deaf and the dumb, kindly lent their aid towards the collection of schoolwork of children so afflicted. The reformatory and refuge union obtained specimens of school-work from eighteen reformatory and industrial schools, and the Director of Convict Prisons sent an interesting contribution of work done by convicts.

The educational class was arranged in the east and west theatres of the Royal Albert Hall, but as foreign contributions continued to arrive, the space in these theatres was found totally inadequate, and the class literally overflowed into all parts of the balcony floor on which the theatres are placed, and even partly down the staircases and up into the gallery. The foreign exhibitors whose contributions were thus strangely arranged on landings and staircases were not thereby losers, for their goods were placed more in the direct streams of visitors than if they had been shown in the theatres. The total number of exhibitors in the class was 911, and their nationalities are shown in the following table:—

## APPENDIX XIX.

Educational  
Works and  
Appliances,  
1871.

	Austria.	Baden.	Belgium.	Denmark.	France.	Germany.	Hungary.	Italy.	Japan.	Queens- land.	Spain.	Sweden.	Wurtem- burg.	United Kingdom.	Total.
Sec. A.	-	1	1	1	1	1	2	1	1	1	1	5	22	22	32
Sec. B.	-	9	1	1	18	1	39	1	1	1	1	22	1	77	170
Sec. C.	-	1	1	1	1	1	1	1	1	1	1	3	1	26	29
Sec. D.	-	12	5	1	1	4	1	1	1	3	1	16	3	140	186
Sec. E.	-	3	30	2	1	1	5	1	1	1	1	9	—	441	494
	25	1	54	2	1	4	50	1	3	4	1	55	4	706	911

The arrangement of the exhibits was as a rule undertaken by the employés of the Exhibition under the occasional superintendence of the gentlemen in whose charge the collection of the various sections had been placed, excepting in one or two cases of large representative collections which were arranged by the exhibitors. The school-work of the blind was arranged by a committee specially appointed, and the Ladies Committee gave assistance in the arrangement of needlework. The French and Indian exhibits in this class were arranged in their respective annexes, and are not taken note of in this report. The Austrian and Hungarian exhibits were arranged in the south galleries near the refreshment rooms. The Swedish contribution, which was perhaps, taken as a whole, the most complete received from any foreign country, was shown in the schoolhouse which was specially built at Stockholm for this Exhibition, and was erected in the western annexe. I will conclude this brief account of the Educational Class of 1871 with the following table which may be of interest, and which shows the numbers of the various classes of schools in the United Kingdom that took part in this Exhibition:—

Army schools	-	-	-	-	-	-	-	-	-	-	-	-	14
Art and science schools	-	-	-	-	-	-	-	-	-	-	-	-	14
Art schools	-	-	-	-	-	-	-	-	-	-	-	-	44
Schools for the deaf and dumb	-	-	-	-	-	-	-	-	-	-	-	-	7
Schools for the blind	-	-	-	-	-	-	-	-	-	-	-	-	11
Primary schools	-	-	-	-	-	-	-	-	-	-	-	-	282
Grammar schools, middle class schools, and similar institutions	-	-	-	-	-	-	-	-	-	-	-	-	36
Industrial and reformatory schools	-	-	-	-	-	-	-	-	-	-	-	-	28
Convict prison schools	-	-	-	-	-	-	-	-	-	-	-	-	5
												Total	441

E. G. CLAYTON, Capt. R.E.

## APPENDIX XX.

## MACHINERY. 1871.

The machinery shown in the 1871 Exhibition was exhibited in connexion with three distinct subjects, *viz.*, woollen and worsted manufacture; pottery manufacture; and scientific inventions.

Machinery,  
1871.

The greater part of it was arranged on the ground floor of the west galleries; but the pottery machinery and processes were contained in an iron annexe to the east galleries, so as to communicate directly with the rooms and arcades wherein were arranged the various finished products of ceramic art.

*Prime Movers.*—Motive-power was obtained from shafting driven, in sections, by engines of a portable or semi-portable description, exhibited by their manufacturers. The objects of employing this class of engine for prime movers were threefold:—

*a.* They obviated the necessity of erecting permanent boilers, with brick seatings and high chimney-shaft, the cost and unsightliness of which would have been alike objectionable.

*b.* In the event of any accident necessitating the stoppage of an engine, or the shafting driven by it, a small portion only of the exhibited machinery would have been affected by the mishap, instead of there occurring a general standstill, which would have resulted from any accident upon one long continuous shaft.

*c.* An opportunity was afforded for the exhibition of several specimens of an important type of engine, growing daily more into favour and use with manufacturers. Thus in the 1871 Exhibition no less than nine prime movers were shown daily in operation.

*Engine Houses.*—The engines on the west side were contained in small houses built as annexes to the machinery galleries, and mainly of glass, so as to afford facility of inspection by the visitors, whilst their separation by glass from the main avenues protected the public from the annoyance of heat and steam.

*Woollen Machinery.*—The woollen and worsted machinery being for *Woollen Machinery.* entirely distinct manufactures were naturally kept distinct in arrangement, although exhibited in the same class. The woollen machinery comprehended almost every machine used in the various processes of wool washing, shearing, scouring, drying, burring, oiling, carding, spinning, twisting, reeling, and weaving woollen fabrics, together with samples of the accessory machines for milling, raising, and cutting of cloth, for feeding carding engines, &c. A valuable feature of this section consisted in the complete series of Belgian carding machinery for pure wool, of which the official reporter observed, "This Exhibition contains

Machinery,  
1871.

" the most complete assortment, the most recent, novel, and perfect examples from the continent, hitherto introduced."

Worsted  
Machinery.

*Worsted Machinery.*—The gallery in which the worsted machinery was exhibited was compared, by the same authority, to " an unique and complete little worsted mill." Through the exertions of Lieut. C. Seton, R.E., and Mr. H. W. Ripley (the present M.P. for Bradford), there was organised, from the Bradford exhibitors, a complete representation of all the processes of worsted manufacture, viz., long wool washing, preparing, combing (both long and short wool), carding, back washing, spinning, and weaving ; and the yarns actually produced in the Exhibition were weekly disposed of in Bradford.

Pottery  
Machinery.

*Pottery Machinery.*—An Exhibition affords, perhaps, less scope for the display and working of the different machines and processes common for the manufacture of pottery than for the other industrial arts. Thus, for decorative wares, the quiet of a studio, and the dirt and heat of a firing furnace, form extremes in the process of manufacture which would obviously be inapplicable for illustration in public. Yet the Exhibition of 1871 contained many machines and processes of an intermediate character, and for the humbler forms of keramic ware, such as potters' wheels in operation, the processes of manufacturing clay tesserae for mosaics, encaustic tiles from pulverised clay, machines for the manufacture of bricks, tiles, and drain pipes, for pulverising clays, stones, and pottery, for grinding the colours used in painting china, and finally, a good collection of models, kilns, drying-rooms, and machinery too large for exhibition on a full scale.

Scientific  
Inventions.

*Scientific Inventions.*—Very few of the machines exhibited in the division of scientific inventions required motive-power ; but the prime mover appointed to produce it was of itself an object of considerable interest, being an " aëro-steam " engine, built expressly to illustrate the recent proposal to induce a rapid generation of steam by the propulsion of heated air directly into the water of the boiler. This invention attracted considerable public interest at the time, and the Exhibition permitted its examination in London by many people who would otherwise have had no opportunity of witnessing the working of the engine.

In addition to the scientific inventions in motion, the printing machine (which daily produced the " Key ") was worked also by this " aëro-steam " engine.

G. E. GROVER,  
Captain R.E.

## APPENDIX XXI.

## SCIENTIFIC INVENTIONS. (Division III.) 1871.

Scientific  
Inventions,  
1871.

## COMMITTEE:

F. A. Abel, Esq., F.R.S.	John Penn, Esq., F.R.S.
J. Anderson, Esq., LL.D., F.R.S.E.	John Platt, Esq., M.P.
C. F. Beyer, Esq.	Dr. D. S. Price.
F. J. Bramwell, Esq.	John Ramsbottom, Esq.
Sir William Fairbairn, Bart., LL.D., F.R.S.	John Robinson, Esq.
Professor E. Frankland, D.C.L., F.R.S.	C. W. Siemens, Esq., D.C.L., F.R.S.
Professor T. M. Goodeve, M.A.	Professor J. Tyndall, LL.D., F.R.S.
Thomas Hawksley, Esq.	C. B. Vignoles, Esq., F.R.S.
John Hick, Esq., M.P.	Sir Joseph Whitworth, Bart.
Walter May, Esq.	Sir Charles Wheatstone, D.C.L., F.R.S.
W. Menelaus, Esq.	

The third division of the Exhibition, viz., scientific inventions and new discoveries, purported to include such novelties as would not properly come within the scope of the Industrial Division of the year, and were yet of such value and importance as to render it undesirable that their introduction to the public should be delayed until the regular year for their manufacture should come round in the industrial series.

Hence resulted great labour on the part of the Committee, who had to select inventions of value from a most heterogeneous collection.

The objects were generally classified under two heads, mechanical and chemical, for each of which there was appointed a separate reporter, and the former were naturally assisted most cordially by the Institute of Mechanical Engineers.

The accepted inventions were displayed in No. 26 room, at the south end of the west machinery galleries. Those requiring motion were provided with main shafting driven by a Warsop aëro-steam engine, itself an object of much interest in the division, and one invention (Hodgson's wire tramway) requiring its own prime mover, was exhibited in operation in the west annexe independently.

G. E. GROVER, Captain R.E.

Staff College, 26th February 1875.

## APPENDIX XXII.

Cotton, 1872.

## COTTON. Class VIII., 1872.

## COMMITTEE.

The following acted as the Committee in this class:—

Professor Archer.	J. Houldsworth, Esq.
Benjamin Armitage, Esq.	James Knight, Esq.
E. Ashworth, Esq.	Hugh Mason, Esq.
John Boldero, Esq.	J. Pender, Esq., M.P.
Hugh Birley, Esq., M.P.	Malcolm Ross, Esq.
Jacob Bright, Esq., M.P.	J. Wilson, Esq.
E. Corbiere, Esq.	

The following special regulations were issued:—

I. Cotton fabrics of all kinds will be exhibited, as well as the raw material, machinery, and processes used in their production. Special arrangements will be made for showing the cotton plant under cultivation.

II. Producers engaged in the various trades, such as the following, connected with the manufacture of cotton fabrics, may submit specimens of the particular work in which they are engaged, although they may not form complete objects. Thus a velveteen cutter may show how the pile is formed and cut, the spinner of yarns may show the operations by which the different varieties are produced, &c.

## COTTON TRADES.

Calico glaziers.	Fustian skinners and stiffeners.
Calico manufacturers.	Gingham manufacturers.
Calico web manufacturers.	Heald yarn manufacturers.
Candle wick manufacturers.	Jeans, manufacturers of.
Cotton and cotton yarn manufacturers.	Jewellers' cotton makers.
Cotton and rush manufacturers.	Lamp cotton makers.
Cotton band manufacturers.	Manchester warehousemen.
Cotton bleachers.	Measuring tape makers.
Cotton carders.	Moleskin manufacturers.
Cotton check manufacturers.	Muslin manufacturers.
Cotton cloth manufacturers.	Nankeen manufacturers.
Cotton cord manufacturers.	Packing sheet manufacturers.
Cotton doublers.	Padding manufacturers.
Cotton sheet manufacturers.	Quilt and quilting manufacturers.
Cotton spinners.	Reel cotton makers.
Cotton tick manufacturers.	Rush and wick manufacturers.
Cotton twist manufacturers.	Sewed cotton manufacturers.
Cotton warp doublers.	Sewed muslin manufacturers.
Cotton warp dressers.	Sewing cotton and thread manufacturers.
Cotton warpers.	Shirting manufacturers.
Cotton warp manufacturers.	Silesia manufacturers.
Cotton warp sizers.	Stampers of muslin embroidery.
Cotton weavers.	Thread manufacturers.
Counterpane manufacturers.	Tick manufacturers.
Coverlet manufacturers.	Twist manufacturers.
Dimity manufacturers.	Velveteen cutters.
Embroidered muslin manufacturers.	Velveteen manufacturers.
Fustian cutters.	Wadding manufacturers.
Fustian manufacturers.	

## LIST OF MANUFACTURES INCLUDED IN THIS CLASS.

Cotton, 1872.

## A.—RAW COTTON, AND COTTON IN VARIOUS STAGES OF PREPARATION. COTTON YARNS AND THREAD.

1. Single yarns in cops, bobbins, hanks, and warp, in all numbers.  
Grey, bleached, dyed, and printed yarns.  
Crape yarns, bleached and dyed.
2. Doubled yarns and thread in all counts and qualities (grey, bleached, dyed, and polished), for manufacturing purposes.  
Sewing threads, knittings, crotchet cottons, &c., in grey, bleached, dyed, and finished states.  
Cotton wadding.

## B.—CALICOES.

Sheetings, grey and bleached.  
Shirtings      „  
Domestics      „  
Madapollams    „  
Printing cloths.  
Long cloths (plain and twilled), bleached.  
Window blinds, bleached and dyed.

## C.—VELVETS, VELVETEENS, CORDS, AND BEAVERTEENS.

1. Velvets,  
Velveteens,  
Cords,
2. Beavertreens,  
Swansdowns,
3. Twills and drills,  
Cantoons,  
Angolas,

} Grey, bleached, dyed, printed, raised, &c.

## D.—MUSLINS.

1. Cambric, jaconnet, and cambric checks.  
Mulls.  
Victoria lawns and Swiss checks.  
Brilliantes.
2. Figured muslins.  
Lappets, lenos, Nottingham nets, white and dyed.  
Jacquard-made goods.  
Lappets, Japan spots and honeycombs.  
"      striped and corded.  
"      allover and diagonal spider.  
"      Bengal scarf spot, assorted.  
Harness, assorted.  
"      garments.  
Window curtains.  
"      spot.  
Book, jaconnet, and Dacca lappets.  
Lenos, plain.  
"      figured.

## Cotton, 1872.

- Small stripe and check doriahs.
- Mexican lappets, coloured and white.
- Turkey gauze, white and dyed.
- 3. Shawls, handkerchiefs, and dresses.
  - Imitation cambric handkerchiefs, plain and embroidered.
  - Lappet shawls.
  - Book muslin dresses, checks, tapes, and cords.
  - "      handkerchiefs.
  - Bleached goods of various finishes.
    - "      cambric finish.
    - "      jaconnet finish.
    - "      book muslins, hard, elastic, and London finish.
    - "      richly ornamented.

## E.—QUILTINGS, DIMITIES, LININGS, &amp;c.

- 1. Quiltings, white and coloured.
  - Toilet, Marseilles, and Alhambra quilts.
  - Counterpanes, white and coloured.
  - Grey sheets and cotton blankets.
  - Toilet covers.
  - Cotton diapers and damasks.
  - Towels.
- 2. Furniture dimities, plain and figured.
  - Hair, cord, and India dimities.
  - Sateens and jeans.
- 3. Silesias, white, dyed, and printed.
  - Fancy linings, white, dyed, and printed.
  - Umbrella ginghams.
  - Jeannettes, &c.
- 4. Cotton belting duck for rubber belting, used as substitute for leather.
  - Cotton duck and drill, for imitation leather cloth and for hose.
  - Cotton sail duck, for sails.

## F.—COLOURED WOVEN COTTONS.

- 1. Handkerchiefs for the pocket, head, neck, and shoulders.
  - Imitation Madras and Pulicat, Bandanas.
  - "      Java and Manilla, Batiks.
  - Fancy white grounds, checks.
  - Imitation white cambric, with figured borders.
- 2. Ginghams.
  - Ginghams for home use.
  - "      for foreign markets.
  - Fancy drills and cottonades.
  - Regattas.
  - Ticks.
  - Diagonals.
  - Grandrelles.
  - Coloured diaper.

Cotton, 1872.

Nankinettes.  
 Fancy matting.  
 Hammock cloths.

3. Dresses, shirtings, scarfs, &c.  
 Polished cotton dress goods.  
 Fancy cotton shirtings.  
 " skirtings.

4. Zebras (mixtures of cotton and wool).  
 Blue and white striped dresses.  
 Orangine pine                         "  
 Blue pine                                 "  
 Robe de chambre                         "  
 Double zebra scarfs.  
 Rich wool scarfs.  
 Variegated shawls.

## G.—PRINTED COTTONS.

1. Handkerchiefs for the pocket, head, neck, and shoulders.
  - Imitation Bandanas.
  - ,, Java and Manilla, Batiks.
  - Fancy white grounds, checks.
  - Imitation white cambric, with printed borders, &c.
2. Dresses, scarfs, &c.
  - Java bugis and Manilla sarongs.
  - Java chindies and scarfs.
3. Zebras (cotton only).
  - Blue and white striped dresses.
  - Orangine pine                "
  - Blue pine                "
  - Robe de chambre                "
  - Double zebra scarfs.
  - Variegated shawls.

#### H.—SMALLWARES (consisting wholly of cotton).

Tapes.  
Webs.  
Trimmings.  
Fringes.  
Bindings.  
Hat bands.  
Braids and cords.

## I.—OIL-PROOFED CALICOES OR CAMBRICS.

Cloth for packing.  
" patent packing.  
Cotton felt for packing.  
Cloth for baizes and table-covers.  
Cotton leather cloth.

## Cotton, 1872. K.—INDIA-RUBBER-PROOFED CALICOES OR CAMBRICS.

Cotton cloth for garments.

” for printers' blankets.

” for steam packing.

Among the most noticeable contributions to the textile class of 1871 (woollen and worsted fabrics) were the collections made and exhibited by various chambers of commerce. It was hoped that a similar collection of cotton products might have been made in 1872 by the Manchester Chamber; but after some little correspondence it appeared that the Manchester manufacturers were unwilling to exhibit their goods unless their own names were attached to them. It was therefore thought more advisable to form a local committee at Manchester, who should decide upon accepting or rejecting goods offered for exhibition, before they were despatched to London. Mr. Browning, the Secretary to the Manchester Chamber of Commerce, acted as Secretary to this Local Committee, and very materially lightened the labours of the executive officers of the Exhibition. The Local Committee also performed a great part of the work ordinarily entrusted to the Committee of Selection in London. It was for this Exhibition of 1872 that the ordinary Committees were first requested to do more than merely select goods for exhibition, and were invited to give advice as to the best method of rendering the representation of each class more complete, where such representation appeared to be deficient. They were not indeed committees of advice to the same extent as the committees of 1873 and 1874, as they did not meet until after the goods had been received, but even at this late date the assistance they were able to afford was of very great benefit. In addition to the Local Committee at Manchester and the Committee of Selection for Cotton Products, there was a third committee, namely, the "Committee for the Horticultural Department of Classes 8 and 12 (Cotton and Paper)." The labours of this Committee produced perhaps the most interesting collection in this year's Exhibition, that of living and dried specimens of cotton plants from various quarters of the globe. As in 1871 with the woollen and worsted fabrics, there was shown a collection of wool bearing animals, so in 1872 with the cotton class was shown the cotton plant itself, growing in a house specially prepared for it, the whole collection being arranged by Major Trevor Clarke. Here were cotton plants from Borneo, China, India, New Orleans, &c., and to those who wished to study this interesting plant, an opportunity was given such as certainly had never before been known. In addition to the living specimens, numerous samples of dried cotton were shown, and the whole of this collection also (with the exception of the Indian cottons) was arranged by Major Trevor Clarke. The manufactured goods in this class were displayed in the east and west quadrants, the raw material being arranged in the same room with the

cotton machinery. The former, with very few exceptions, were arranged for exhibition by the employés of H.M.'s Commissioners. The number of exhibitors was, of raw materials, 18, manufactured goods, 85, their nationalities being shown in the following table:—

	Austria.	Belgium.	Fiji Is- lands.	Germany.	India.	Italy.	Russia.	Sicily.	Sweden.	Venezuela.	U.S. of Colombia.	United Kingdom.	Total.
Raw materials	—	1	1	—	3	2	2	—	—	1	1	7*	18
Manufactured goods	2	9	—	2	2	1	—	1	3	—	—	65	85
Total	2	10	1	2	5	3	2	1	3	1	1	72	103

\* Under the head of "United Kingdom" are included Major Trevor Clarke and the London Cotton Brokers' Association, which showed samples from all parts of the world.

E. G. CLAYTON, Capt. R.E.

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### APPENDIX XXIII.

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#### JEWELLERY. Class IX., 1872.

Jewellery,  
1872.

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##### COMMITTEE OF SELECTION.

Sir J. Kelk.	C. F. Hancock, Esq.
Sir William Drake.	J. Hunt, Esq.
Dr. Birdwood.	R. Phillips, Esq.
T. Clark, Esq.	H. Rivett-Carnac, Esq.
Samuel Gas, Esq.	G. Wallis, Esq.

During the Exhibition of 1871 the question of enlisting the co-operation of the Birmingham jewellery trade came under consideration, and the Mayor of Birmingham was addressed with a view of inviting a deputation of Birmingham manufacturers to visit the Exhibition for the purpose of inspecting the arrangements and advising as to what would be specially necessary for showing off jewellery to the best advantage. In the jewellery trade there are so many persons interested in sales of jewellery (*i.e.*, factors, middlemen, or agents) that it soon became apparent that there would be some difficulty in inducing manufacturers to exhibit under their own name and to give prices. The purchasing public very rarely comes into actual contact with the wholesale makers of the jewellery they buy, still in the public interest an endeavour was

Jewellery,  
1872.

made to show in the Exhibition where jewellery is made, and the different classes of personal ornaments made for different markets.

In November 1871 General Scott and myself attended a meeting of jewellers at Birmingham. On this occasion a resolution was passed to make a collective exhibition of every kind of personal ornament made in Birmingham, and a local committee was formed in order to carry the resolution into effect.

In consequence of the advice given by a deputation which came to the Exhibition, some special cases were prepared, one size 2 feet by 1 foot 4 inches by 4 inches, the other size 1 foot 4 inches by 1 foot by 4 inches. Each case was provided with two different locks.

Special arrangements had to be made for the security of the valuable collections of jewels contributed by private owners and ordinary exhibitors, and safes were provided for locking them up at night. Exhibitors possessing valuable collections were also allowed to have their own keys and to take their own measures for the more complete security of their property.

The following printed regulations for exhibiting jewellery were circulated among the trade in Great Britain, and communicated to the various Foreign Commissions:—

I. Jewellery of all kinds, *i.e.*, personal ornaments made of precious metals, precious stones, or their imitations, will be exhibited, as well as the raw materials, machinery, and processes used in their manufacture. Goldsmiths' and silversmiths' work, and watches and clocks, will not be admissible except as Fine Art, but will be exhibited in 1875 and 1876.

II. In this class the following trades, together with any others engaged in the production of jewellery, may submit specimens of their respective branches of production:—

#### LIST OF TRADES.

##### PRECIOUS METALS, JEWELLERY, &c.

Black ornament makers.	Gold enamellers.
Burnished silver manufacturers.	Gold plating manufacturers.
Cameo cutters.	Gold ring makers.
Chasers.	Goldsmiths and jewellers.
Coral and jet carvers.	Gold swivel makers.
Coral and jet workers.	Gold weavers.
Coral manufacturers and merchants.	Jet ornament makers.
Diamond cutters, setters, and workers.	Jet workers.
Diamond merchants.	Jewellers.
Electrotypers	Jewellers' stampers.
Embossers.	Lapidaries.
Enamellers	Mourning and wedding ring makers.
Gilt jewellers.	Pearl merchants.
Gold and silver chasers.	Pearl ornament makers.
Gold and silver engravers.	Pearl stringers.
Gold and silver ornament makers.	Pearl workers.
Gold and silver mounters.	Silver chain makers.
Gold and silver piercers.	Silver chasers.
Gold and silver thread makers.	Silver engravers.
Gold and silver wire drawers.	Stud makers.
Gold chain makers.	Watch guard makers.
Gold cutters.	Wedding ring makers.

By these means a fair show of modern jewellery was secured, and two exhibitors showed the making of jewellery in actual operation. Jewellery,  
1872.

One of the most complete sections of the exhibition of jewellery was that of peasant jewellery. An arrangement was made with the authorities of the South Kensington Museum to make a collection from all parts of the world, which should become public property, for exhibition in the Museum after the close of the Exhibition. Accordingly the following circular was communicated by the Secretary of State for Foreign Affairs to British representatives abroad, and authority was given to make purchases on behalf of Her Majesty's Commissioners:—

#### INTERNATIONAL EXHIBITION OF 1872.

##### REPRESENTATION OF PEASANT JEWELLERY.

I. Her Majesty's Commissioners have announced in the General Rules, that a representation of all kinds of jewellery will be included in the Programme for the International Exhibition of Selected Works in 1872.

II. It has been explained that jewellery embraces all kinds of ornament worn for personal decoration, except watches, which will be exhibited in 1875.

III. Besides jewellery of a costly kind, Her Majesty's Commissioners desire to obtain the most complete and perfect collection of all kinds, characteristic to the country to which it is produced, and especially that used by the peasantry.

IV. Such jewellery should have a direct connexion with the native instinctive art, which has been handed down by long tradition. Thus Italy Spain, Hungary, &c. may be instanced as each having a native jewellery, worn more or less by all classes, which to this time remains uncontaminated by the introduction of foreign forms based on the fashion of the day. Throughout India ancient types are preserved, but the Delhi jewellery of the Upper Provinces most commonly offered for sale to the better classes of Europeans is simply an inferior imitation of Parisian or European designs. Photographs of Delhi jewellery of purely native character, as distinguished from the former, which will serve to illustrate the classes of traditional ornament that Her Majesty's Commissioners desire to have represented, have been prepared, and may be obtained on application to the Secretary.

V. Collections of peasant jewellery have been made for the South Kensington Museum. Those from Italy are numerous and of all varieties, and owe their design to the peculiar instincts of thousands of years, preserved in different localities.

VI. To have a complete representation of international personal ornament it will be necessary to collect specimens at least of various objects from all parts of the world. Such an exhaustive series will be of great interest, and be appreciated by the public museums of the United Kingdom as well as by the public at large. It is therefore hoped that all countries will voluntarily contribute collections of this nature; but Her Majesty's Commissioners will be prepared to consider the purchase of specimens from such localities as are not likely to undertake their own representation officially, provided that an estimate is first sent to the Commissioners, and a definite amount authorised by them. In

Jewellery,  
1872.

collecting such specimens it is necessary that characteristic design should, however, be of much greater consideration than intrinsic value, and that the price be very moderate.

HENRY Y. D. SCOTT, Colonel, R.E.,  
Secretary.

Office of Her Majesty's Commissioners for the Exhibition of 1851.

Kensington Gore, 8th August 1871.

The result was most satisfactory and a collection of characteristic ornaments never before equalled was obtained. A very complete collection of Indian jewellery of all kinds was shown in the Indian Court, pains having been bestowed by the local Indian authorities in the collection of specimens.

*Loan Jewellery.*

Her Majesty the Queen was pleased to contribute to this collection by sending a model of the Koh-i-noor, Her Royal Highness the Princess of Wales lent a fine collection of Danish jewellery, some splendid jewels were lent by Lady Dudley, and the Guicowar of Baroda lent a fine chuddah embroidered with pearls. Besides these there were 29 private contributors of all kinds of jewellery.

*Modern Jewellery.*

Country.	No. of Exhibitors.	Remarks.
Great Britain - -	33	Not including the Collective Exhibition from Birmingham, which was supported by about 50 Exhibitors, but no names were given.
Victoria - - -	2	
Austria - - -	4	
Italy - - -	5	
Russia - - -	2	
Holland - - -	1	
Belgium - - -	2	
Bavaria - - -	1	
Norway - - -	1	
France - - -	—	Represented in the French Annex.

*Peasant Jewellery.*Jewellery,  
1872.

Country.		Remarks.
France	-	Procured by purchase through the French Commissioners.
Spain	-	Purchased through Mr. Layard.
Portugal	-	
Germany	-	Purchased by H.I.H. the Crown Princess of Prussia.
Sweden	-	Purchased through British representative.
Greece	-	Do. do. do.
Malta	-	Purchased by Professor Archer.
Armenia	-	Purchased through British representative. -
Wallachia	-	Do. do. do.
Colombia	-	Do. do. do.
Albania	-	Do. do. do.
India	-	Lent by Mrs. Rivett Carnac.

H. H. COLE, Lt. R.E.

## APPENDIX XXIV.

## MUSICAL INSTRUMENTS. Class X., 1872.

Musical  
Instruments,  
1872.

The following acted as the Committee in this class:—

Lord Gerald Fitzgerald.	J. Hullah, Esq.
Sir Julius Benedict.	Henry Kirkman, Esq.
Sir Sterndale Bennett.	H. Leslie, Esq.
C. Boullangier, Esq.	Herr Ernst Pauer.
F. Clay, Esq.	Signor Piatti.
J. W. Elliott, Esq.	J. W. Rendle, Esq.
C. Godfrey, Esq.	J. R. Sawerthal, Esq.
Otto Goldschmidt, Esq.	J. Smyth, Esq.
W. E. Hill, Esq.	A. Sullivan, Esq.
E. J. Hopkins, Esq.	J. Van Maanen, Esq.
John Hopkinson, Esq.	J. C. Ward, Esq.

The following special regulations were issued:—

I. Musical instruments of all kinds will be exhibited, as well as the materials, machinery, and processes used in their manufacture.

Musical  
Instruments,  
1872.

II. In this class the following trades, together with any others engaged in the production of musical instruments, may submit specimens of their respective branches of production.

LIST OF TRADES.

*Music.*

Accordion makers.  
Bugle and trumpet makers.  
Concertina manufacturers.  
Drum makers.  
Flageolet makers.  
Flute makers.  
Foresters' horn manufacturers.  
Fret cutters (pianoforte).  
Guitar makers.  
Hammer rails makers.  
Harmonicon manufacturers.  
Harp makers.  
Harp string makers.  
Horn, trumpet, and bugle makers.  
Military musical instrument makers.  
Musical box makers and importers.  
Musical instrument makers.  
Musical instrument string makers.  
Musical instrument turners.  
Musical tube makers.  
Music smiths.  
Music wire manufacturers.

Organ builders.  
Organ key makers.  
Organ metal pipe makers.  
Organ turners.  
Pianoforte action makers.  
Pianoforte hammer coverers.  
Pianoforte hammer rail makers.  
Pianoforte key makers.  
Pianoforte makers.  
Pianoforte pin makers.  
Pianoforte silkers.  
Pianoforte small work manufacturers.  
Pianoforte string makers.  
Pianoforte turners.  
Seraphine makers.  
Trumpet makers.  
Tuning fork manufacturers.  
Violin and bow string makers.  
Violin bow makers.  
Violin makers.  
Violoncello makers.

While the first steps were being taken by the officers of the Exhibition towards making known to manufacturers of musical instruments that the products of their industry would be shown in the Exhibition of 1872, it became apparent that in order to make the Exhibition generally useful, it would be desirable, if not absolutely necessary, that musical recitals should be given in the Albert Hall, at which exhibited instruments might be heard together. But in order that this might be done, it was necessary that an uniform pitch should be decided on. A public meeting was therefore summoned at the Royal Albert Hall on 20th January 1872, when Mr. John Hullah took the chair, which was largely attended by musical instrument makers and others. At this meeting it was resolved that all exhibitors who might wish to have their instruments tried at the recitals before mentioned, should be required to adopt the pitch recommended by the Society of Arts in 1860, namely, that of 528 vibrations to C. Tuning forks of this pitch were therefore obtained by the executive of the Exhibition, and were supplied to those exhibitors who applied for them. After this preliminary meeting, no especial measures were adopted towards securing a fair representation of this class beyond sending out the usual circulars and notices, and there was no meeting of the committee of selection until some of the instruments had been received. This committee, like all others of 1872, was in the main elected by intending exhibitors; but the plan involved a great deal of correspondence, and did not seem to produce

any particularly beneficial results, so it was not followed in succeeding years. The first meeting of the committee was held on the 8th April 1872, when they appointed the following sub-committees.

Musical  
Instruments,  
1872.

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- a. For pianos.
- b. For organs.
- c. For string instruments.
- d. For harmoniums and concertinas.
- e. For wind and percussion instruments.

These sub-committees did not all complete their work until the 25th of May, nearly four weeks after the Exhibition had been opened.

The total number of exhibitors was 96, of whom 78 were from the United Kingdom. The nationalities of foreign exhibitors are shown below:—

Austria	-	-	-	-	3
Belgium	-	-	-	-	3
Italy	-	-	-	-	1
Norway	-	-	-	-	1
Prussia	-	-	-	-	3
Russia	-	-	-	-	1
Saxony	-	-	-	-	1
Sweden	-	-	-	-	2
United States	-	-	-	-	1
Wurtemburg	-	-	-	-	2
				Total	18

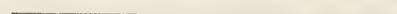
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These numbers do not include French exhibitors, whose instruments were shown in the French annexe.

The class was arranged under the orders of Mr. A. S. Cole, of the Science and Art Department, in the east galleries, the organs being distributed throughout the buildings.

Arrangements were made for daily performances on the various instruments, a certain time each day being also set apart for trial of the instruments by visitors to the Exhibition.

E. G. CLAYTON, Capt. R.E.



## APPENDIX XXV.

Paper,  
Stationery, and  
Printing,  
1872.

## PAPER, STATIONERY, AND PRINTING. Class XII., 1872.

The following acted as the Committee for this class :—

Sir William Mitchell.	J. Evans, Esq., F.R.S.
Sir Sydney Waterlow.	H. Gotto, Esq.
F. H. Arnold, Esq.	E. N. Haines, Esq.
Vincent Brooks, Esq.	Owen Jones, Esq.
R. Canton, Esq.	W. Longman, Esq.
George Chater, Esq.	John Murray, Esq.
John Coe, Esq.	Wyndham S. Portal, Esq.
John Cowan, Esq.	C. Reed, Esq., M.P.
J. Cundall, Esq.	A. Rivington, Esq.
Warren De la Rue, Esq., D.C.L., F.R.S.	W. Spicer, Esq.
W. Dickes, Esq.	B. Sulman, Esq.
Captain E. F. Du Cane, R.E.	William H. Ward, Esq.

The following special rules were issued :—

I. Paper, stationery, and printing of all kinds will be exhibited, as well as the raw materials, machinery, and processes used in their manufacture.

II. In this class the following trades, together with any others engaged in the production of paper, stationery, and printing, may submit specimens of their respective branches of production.

## PAPER.

Bank note paper makers.  
Black borderers, paper.  
Bristol board makers.  
Button card manufacturers.  
Card and cardboard makers.  
Cardboard box makers.  
Card cutters.  
Card manufacturers, playing.  
Card stampers.  
Coloured paper manufacturers.  
Fancy box makers.  
Fancy paper makers.  
Gold and silver paper makers.  
Hot pressers.  
Millboard makers.  
Millboard, paper, hat, &c. box makers.  
Paper bag makers.

Paper borderers.  
Paper box makers.  
Paper case makers.  
Paper embossers.  
Paper flax bowl manufacturers.  
Paper glossers.  
Paper makers.  
Paper marblers.  
Passe partout makers.  
Pasteboard box makers.  
Pasteboard makers.  
Pattern card makers.  
Pill box makers.  
Playing card makers.  
Ticket manufacturers.  
Tracing paper makers.

## STATIONERY.

Black lead pencil makers.  
Envelope makers.  
Ever-pointed pencil makers.  
Fancy stationers.  
Ink makers (printing).  
Ink manufacturers.  
Ink powder makers.  
Inkstand makers.  
Manifold writer makers.  
Marking ink makers.

Marking plâtre makers.  
Pencil makers.  
Penholder makers.  
Printer's ink manufacturers.  
Quill and pen merchants and manufacturers.  
Sealing-wax and wafer makers.  
Stationers.  
Valentine makers.  
Wafer makers.  
Writing fluid makers.

## BOOKBINDING CONNECTED WITH STATIONERY.

Account book manufacturers.  
Card case makers.

Pattern book makers.  
Pocket book makers.

Paper,  
Stationery, and  
Printing,  
1872.

## PRINTING.

Anastatic printers.  
Copper plate printers.  
Gold and silver printers.  
Label makers (parchment).  
Lithographers.  
Lithographic printers.  
Machine rulers.  
Music engravers and printers.  
Music paper rulers.  
Music printers.  
Numerical printers.  
Oil colour printers.  
Paper rulers.

Printers.  
Printers' wood type cutters.  
Railway ticket printers.  
Rulers, machine.  
Steel plate printers.  
Stereotypers.  
Stereotype founders.  
Type cutters, wood.  
Type founders.  
Typographical music printers.  
Wood letter cutters.  
Wood type cutters.  
Zincographic printers.

For this class, as for that of cotton, there were two Committees appointed, one for raw materials and the other for manufactured goods.

The latter held their first meeting on the 22nd March 1872, when they formed the following sub-committees:—

- a. Paper, card, and millboard.
- b. Stationery, account books, &c.
- c. Letterpress, plate, and all other modes of printing.

They also passed certain important resolutions regarding the rejection of goods, giving authority to the executive officers to deal with all cases of duplicates, and made various recommendations as to the best method of completing the representation of the class. Those firms to whom they recommended that application for exhibits should be made, were in most cases personally visited, and the objects of the Exhibition were explained to them. These applications were, as a rule, successful. The Committee held a second meeting on the 10th April 1872, when it was decided to show in connexion with Section c. specimens of Bank of England notes, and of foreign bank notes, commencing from the year 1669. The former were kindly contributed by the Bank of England, the latter by Mrs. Evans. The Committee for raw materials succeeded in collecting a very interesting exhibition of fibres, &c., for paper making, but there is no evidence to show whether any of the raw materials thus brought to the notice of paper manufacturers, have been since used to any extent in England. The fibre which, according to the report published by the Society of Arts, was most approved, was the *sida retusa*, a common weed growing in Queensland, and it would be interesting to know whether any steps have been taken towards its introduction to this country.

The arrangement of the class was a matter of some little difficulty. Under the head of stationery were included objects so miscellaneous that classification seemed to be almost impossible. The old objection of

Paper,  
Stationery, and  
Printing,  
1872.

exhibitors to the separation of their goods threw further difficulties in the way, but this was at least partially overcome. The arrangement was confided to Mr. Watson and to Mr. Leopold Martin, the former arranging Sec. *a.*, the latter, Secs. *b.* and *c.* The whole class was arranged in rooms XXI., XXII., and part of room XXIII. in the south galleries. In the small corridor behind the refreshment rooms, was shown a collection of newspapers from all parts of the world. This collection excited considerable interest, especially among foreigners. A similar collection of newspapers of the United Kingdom was shown in the Paris Exhibition of 1867. In making this collection, great assistance was given to Her Majesty's Commissioners by the diplomatic representatives of Great Britain throughout the world. Any notice of this class would be incomplete without mention of the Japanese collection contributed by the South Kensington Museum, in which were shown the many and varied uses of paper in Japan. A similar, but much smaller collection from China, was purchased and exhibited by Her Majesty's Commissioners.

The following table shows the number and nationalities of the exhibitors:—

Austria.	Bavaria.	Belgium.	China.	Columbia.	Hanover.	Holland.	India.	Prussia.	Russia.	Sweden.	South Australia.	United States.	Victoria.	United Kingdom.	Total.
16	2	12	1	2	1	1	2	9	9	9	1	2	4	163	234

E. G. CLAYTON, Capt. R.E.

Machinery,  
1872.

## APPENDIX XXVI.

### MACHINERY. 1872.

*Prime Movers.*—The arrangements for providing motive power to the machines in motion during the Exhibition of 1872, were similar to those employed during the Exhibition of the previous year, but the number of prime movers was reduced, seven being found sufficient in place of nine.

Six occupied the engine-houses abutting on the west machinery galleries, and the seventh was placed in the east machinery annexe in order to work the "Walter" printing press, which daily printed some portions of the regular editions of the "Times" and "Mail."

Five engines were of the portable or semi-portable type; one was a horizontal stationary engine and the seventh was a vertical engine. They were all of the same nominal 12 horse-power, and thus little expense was incurred by their fixture and removal.

Machinery,  
1872.

The shafting in Nos. 1, 2, 3, 4, and 5 rooms remained as in the previous year, that in No. 26 room was slightly lengthened (by the use of old material), and the shaftings in the east machinery annexe were removed altogether, since the "Walter" press could be driven direct by a band from its engine, and there was need of economising space as much as possible to accommodate the large number of spectators who usually crowded to see the working of this celebrated machine.

*Printing Machinery.*—The Class 12 (paper, stationery, and printing) afforded opportunities for the exhibition of several other modes of letter-press printing, which were displayed in the west machinery galleries, parallel with Prince Albert's Road.

Printing Ma-  
chinery, 1872.

The fourth edition of the "Echo" was printed daily at 3.30 o'clock p.m. on a newly imported "Marinoni" machine, and the daily Exhibition "Key" was likewise struck off in public every afternoon.

The west galleries contained many more machines in common use for the processes of printing wood-cuts, steel and copper-plates, chromolithographs, letterpress, &c. Numbers of the "Art Journal" and other periodicals were produced regularly; relief stamping, card printing, book folding, paper cutting, embossing, numbering, indorsing, and type-founding machines were shown constantly in actual operation, and the curious processes of grapho-typing, Woodbury photograph printing, heliotype printing, and anastatic printing were duly displayed with all their details.

The accessory processes of stationery manufacture were also shown in the same quarter of the Exhibition. Pencil manufacture, sealing wax manufacture, envelope manufacture, paper cutting, &c. &c., were carried on in a refined factory manner, by some of the most eminent firms in the trade, who (at considerable outlay) assisted to develop the Royal Commissioners' programme of illustrating the present condition of industrial manufacture in a practical and instructive manner.

In large cases distributed throughout the same west galleries were arranged specimens of the little tools and appliances requisite for the operatives of the trades included under Class 12, *e.g.*, woven wire cloth, dandy rolls, stencil plates, composing sticks, type cases, &c. &c.

*Cotton Machinery.*—The Secretary of State for India had forwarded for exhibition a most interesting collection of the native agricultural and manufacturing implements used in India for the tilling of ground, and the raising of cotton. These were arranged in the upper part of the west arcades so as to be in the close neighbourhood of the corresponding European machines. Some models accompanying them completed the

Cotton Ma-  
chinery, 1872.

Machinery,  
1872.

collection, which comprised churkas or cotton cleaning machines from Guzerat, Ulwar, and Arracan, spinning wheels from Nagpore, Khandish, and Kutch, and various other Indian appliances.

The cotton-gin competition at Manchester, which had only recently been carried out and concluded under the authority of the India Office, afforded several valuable cotton-gin statistics with the actual machines, to the Exhibition.

These were all arranged in No. 1 room, where also was disposed a complete series of machines illustrating the different processes undergone in the formation of cotton textile fabrics, such as cotton cleaning, combing, carding, drawing, doubling, and twisting (by slubbing and jack frames), spinning (by a mule), yarn winding, weaving, &c. &c.

Such were chiefly the objects for which machinery was displayed in the London Exhibition of 1872.

In textile fabric manufacture there was less to be seen than in the previous year, but the quantity and interest of the several processes for printing letterpress and illustrations of books, together with the many concomitant details of stationery manufacture and preparation, gave this year's Exhibition a curious never-ending attraction and completeness, with instruction, such as certainly has never yet been reached since the art of printing was discovered.

G. E. GROVER, Captain R.E.

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## APPENDIX XXVII.

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Scientific  
Inventions,  
1872.

### SCIENTIFIC INVENTIONS. (Division III.) 1872.

The Committee who acted this year consisted of the following:—

F. A. Abel, Esq., F.R.S.	W. Menelaus, Esq.
J. Anderson, Esq., LLD., F.R.S.E.	John Penn, Esq., F.R.S.
C. F. Beyer, Esq.	Dr. D. S. Price.
F. J. Bramwell, Esq.	John Ramsbottom, Esq.
Major Donnelly, R.E.	John Robinson, Esq.
Sir W. Fairbairn, Bart., LLD., F.R.S.	C. W. Siemens, Esq., D.C.L., F.R.S.
Professor E. Frankland, D.C.L., F.R.S.	Lieut. Col. A. Strange, F.R.S.
Professor T. M. Goodeve, M.A.	Professor J. Tyndall, LLD., F.R.S.
Major-General Harness, C.B.	C. B. Vignoles, Esq., F.R.S.
T. Hawksley, Esq.	Sir Joseph Whitworth, Bart.
John Hick, Esq., M.P.	Sir Charles Wheatstone, D.C.L., F.R.S.

The objects exhibited in this class in 1872 were arranged in the south corridor, room No. 23, with the exception of those whose weight and bulk prevented their convenient removal to a floored gallery, and such heavy objects were placed in the western arcades.

Scientific  
Inventions,  
1872.

Among these were specimens of the Palliser 64-pr. gun (converted from a 32-pr.), a Whitworth field gun, &c.

At the annual conversazione of the President of the Institution of Civil Engineers, held in the west galleries of the Exhibition buildings on the 28th of May, several objects from the scientific inventions court were temporarily placed in the picture galleries thrown open to the visitors, so as to add to the scientific attractions of the evening.

Only 84 objects were exhibited in this class; and about 300 were declined by the Committee as not coming properly within its scope.

G. E. GROVER, Capt., R.E.

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## APPENDIX XXVIII.

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### SILK AND VELVET. Class VIII., 1873.

Silk and Velvet,  
1873.

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The Committee for this class consisted of the following:—

Lady Dorothy Nevill.	H. W. Eaton, Esq., M.P.
Sir David Cooper, Bart.	P. Gadban, Esq.
F. Bennoch, Esq.	P. Graham, Esq.
J. Birchenough, Esq.	E. Harrison, Esq.
W. Blakeley, Esq.	W. Higginbottom, Esq.
E. F. V. Bolingbroke, Esq.	J. Jupe, Esq.
W. C. Brocklehurst, Esq., M.P.	P. C. Leckie, Esq.
T. N. Brocklehurst, Esq.	A. Lewis, Esq.
H. Browett, Esq.	E. P. Lintilhac, Esq.
W. Bullock, Esq.	F. Longdon, Esq.
Dr. A. Campbell.	T. K. Lynch, Esq.
A. Cassells, Esq.	Dr. R. J. Maim.
D. Chadwick, Esq., M.P.	Capt. G. Mason.
J. Chadwick, Esq.	H. M. Matheson, Esq.
Hyde Clarke, Esq.	J. Price, Esq., M.P.
F. Cobb, Esq.	C. A. Peters, Esq.
E. Corbiere, Esq.	J. Small, Esq.
E. Cox, Esq.	H. Tucker, Esq.
F. Dickens, Esq.	J. Vavasseur, Esq.
T. Dickins, Esq.	J. Wright, Esq.
H. Durlacher, Esq.	

Silk and Velvet, 1873. The following special regulations were issued:—

I. Silk and velvet fabrics of all kinds will be exhibited, as well as the raw material, machinery, and processes used in their production. Special arrangements will be made for showing the breeding of the silkworm.

II. Producers of raw silk, and those engaged in the various trades, such as the following, connected with the manufacture of silk and velvet fabrics, may submit specimens of the particular work in which they are engaged.

#### SILK AND VELVET TRADES.

Band and galloon makers.	Silk cord manufacturers.
Bandanna manufacturers and printers.	Silk dressers.
Band spinners.	Silk dyers.
Chenille manufacturers.	Silk embossers.
Crape manufacturers.	Silk japanners.
Damask manufacturers.	Silk manufacturers.
Double manufacturers.	Silk mercers.
Elastic gussett web manufacturers.	Silk printers.
Embroidery silk manufacturers.	Silk reelers.
Floss manufacturers.	Silk shag manufacturers.
Gambroon makers.	Silk spinners.
Gauze manufacturers.	Silk throwers.
Ribbon manufacturers.	Silk trimming manufacturers.
Satin dressers.	Silk waterers.
Sewing silk and twist manufacturers.	Silk winders.
Silk assayers.	Velvet dressers.
Silk braid manufacturers, plain and fancy.	Velvet manufacturers.
Silk card designers.	

III. It is particularly desirable that specimens of silk sent from various countries should be of the patterns commonly worn in those countries, with prices at which they are sold.

IV. Besides specimens of modern silk, Her Majesty's Commissioners are desirous of obtaining, if possible, specimens of silks of older manufacture, in order to be able to institute a direct comparison between the work and patterns of the present day and those of earlier times.

V. It is hoped that all countries will voluntarily contribute collections of this nature, but Her Majesty's Commissioners will be prepared to consider the purchase of specimens from such localities as are not likely to undertake their own representation officially, provided that an estimate is first sent to the Commissioners, and a definite amount authorised by them.

In 1873 the Committees for the various classes of industry became for the first time to the fullest extent committees of advice as well as selection. Commencing their meetings at a date long anterior to that appointed for the reception of goods, they were enabled to point out deficiencies and imperfections at a time when there was some chance of being able to remedy them. In no class, I would venture to say, was the advantage of this arrangement so thoroughly shown as in that of silk and velvet. The personal exertions undertaken, and the advice given by the various members of the committee secured a representation of this class which was sufficient to show the great advance that had been made in silk manufacture since the last Universal Exhibition. The concurrence of the Vienna Exhibition in this year threw difficulties

in the way of the collection of this class, more especially through the *Silk and Velvet, 1873.* absence (officially) of France, which necessitated applications to individual manufacturers in that country. These applications, being cordially supported by one of the members of the committee, were in most cases successful, and the leading firms of Lyons were consequently well represented. The Committee turned their attention at an early date to the representation of raw silk. In connexion with this section of the class Her Majesty's Commissioners were fortunate in enlisting the valuable services of Sir Daniel Cooper, who acted as the chairman. He entered into arrangements with M. Roland, at his own cost, for the erection of a magnanerie in which silkworms should be reared in the open air. The success of this experiment was complete, and very considerable interest was excited by it. The rearing of the silkworm having been decided upon by the Committee, they naturally recommended, as an addition to this part of the Exhibition, a collection of all trees the leaves of which are used as food for silkworms. This collection was obtained from Kew through the kind co-operation of Dr. Hooker.

In 1873, for the first time, there were shown side by side with modern products collections of ancient manufacture. This section of the class of silk was very fairly represented, and proved of great interest. The specimens were mostly contributed by private persons, and were obtained in answer to especial applications for them, a few having been sent in answer to advertisements announcing the exhibition of ancient objects, which were inserted in the newspapers.

H. M.'s Commissioners were greatly assisted in the collection of this class by the various British embassies and consulates, the members of whom spared no pains in making representative collections, of which H. M.'s Commissioners authorised the purchase in many countries.

The number of exhibitors is shown in the following table.

	Algeria.	Austria.	Belgium.	Brousse.	China.	Egypt.	France.	Greece.	Italy.	Japan.	Kaffraria.	Norway.	Persia.	Prussia.	Rhodes.	Russia.	Spain.	Syria.	Tripoli.	Turkey.	United Kingdom.	Totals.
Ancient silks	-	-	-	-	-	-	6	-	4	1	-	1	-	-	-	-	1	-	-	1	24	40
Raw materials	-	1	-	-	1	-	2	2	-	2	-	1	-	-	1	-	2	-	-	-	4	15
Modern products	-	1	1	1	-	3	-	14	1	-	2	-	-	1	2	1	2	1	1	1	52	85
	1	1	1	1	5	2	22	1	6	3	1	1	1	3	1	4	2	1	1	2	80	140

(Note. British exhibitors contributing objects from foreign countries are entered under the country whose manufactures they exhibited.)

E. G. CLAYTON, Capt., R.E.

## APPENDIX XXIX.

Steel, 1873.

## STEEL. Class IX., 1873.

The following acted as the Committee for Steel, Cutlery, and Edge Tools:—

The Earl of Caithness.	A. W. Franks, Esq., M.A., F.S.A.
The Earl of Dudley.	Colonel T. Inglis, R.E.
Lord Richard Grosvenor, M.P.	John Latham, Esq.
Sir Joseph Whitworth, Bart.	Edward Mappin, Esq.
Sir W. Fairbairn, Bart., LL.D., F.R.S.	F. T. Mappin, Esq.
Sir John Brown.	Dr. J. Percy, F.R.S.
F. A. Abel, Esq., F.R.S.	E. J. Reed, Esq., C.B.
John Anderson, Esq., LL.D., F.R.S.E.	Joseph Rodgers, Esq.
C. Asprey, Esq.	C. W. Siemens, Esq., D.C.L., F.R.S.
H. Bessemer, Esq.	J. Gordon Smith, Esq.
W. Bragge, Esq.	Warrington W. Smyth, Esq., M.A., F.R.S.
Colonel F. Campbell, R.A.	Captain A. C. Tupper, F.S.A.
J. Evans, Esq., F.R.S., F.S.A.	T. Turner, Esq.
Mark Firth, Esq.	T. E. Vickers, Esq.
Colonel A. Lane Fox, F.S.A.	A. Vickers, Esq.

## COMMITTEE (FOR STEEL APPLIED TO RAILWAY PURPOSES):

W. Adams, Esq.	W. Martley, Esq.
R. Angus, Esq.	A. McDonnell, Esq.
J. Armstrong, Esq.	R. Ramage, Esq.
J. Beattie, Esq.	J. Ramsbottom, Esq.
J. I. Carson, Esq.	Lieut.-Col. F. H. Rich, R.E.
E. Corner, Esq.	C. Saeré, Esq.
E. Fletcher, Esq.	P. Stirling, Esq.
Lieut.-Col. C. S. Hutchinson, R.E.	W. Stroudley, Esq.
S. W. Johnson, Esq.	Captain H. W. Tyler, R.E.
W. Kendall, Esq.	J. Wakefield, Esq.
M. Kirtley, Esq.	F. W. Webb, Esq.
	T. Wheatley, Esq.

The following special regulations were issued:—

## I. Class 9 is divided into the following sections:

a. SPECIMENS OF ALL KNOWN VARIETIES OF STEEL, WITH DESCRIPTIONS OF THEIR COMPOSITION, QUALITY, TEMPER, USUAL FORMS OF APPLICATION, &c.

**b. MACHINERY, PROCESSES, AND APPARATUS FOR THE TESTING OF STEEL** Steel, 1873.  
**RAILS, STEEL WIRE ROPES, &c.**

**c. STEEL MANUFACTURES.**

1. Tools and heavy steel toys, hammers, vices, &c.
2. Steel ornaments and light fancy steel toys, brooches, buckles, &c.
3. Steel pens.
4. Needles, fish-hooks, and fishing tackle.
5. Shot and shell.
6. Barrels for guns and small arms.
7. Steel used for railway purposes, such as rails, axles, tyres, springs, &c.
8. Steel boiler and ship plates.
9. Steel wire ropes.

**d. CUTLERY AND EDGE-TOOLS.**

**1. Knives and forks :**

- Table, dessert, and carving.
- Dessert or fruit.
- Cake and melon carvers.
- Fish knives and forks.
- Case knives for travellers.

**2. Spring knives :**

- Pen and pocket knives of every description.
- Hunting and sportsmen's knives.

**3. Knives of all other descriptions :**

- Paper knives of all kinds.
- Desk or office knives.
- Palette knives.
- Knives for hunting and self-defence, as couteaux-de-chasse, bowie knives, &c.
- Knives for kitchen and domestic purposes, as cook's, oyster, onion, bread, butter, and cheese knives.
- Knives used in various trades, as butchers', shoemakers', glaziers', gardeners', &c.

**4. Scissors and shears :**

- Ladies' work and cutting-out scissors of every description.
- Nail, button-hole, barbers', and trimming scissors.
- Shears used in various trades, as tailors', brushmakers', &c.
- Garden and sheep shears.
- Seythes, sickles, and hay knives.

**5. Razors.**

**6. Swords, daggers, lances, boar-spears, harpoons, &c.**

**7. Spurs.**

**8. Miscellaneous :**

- Corkscrews, button-hooks, boot-hooks, nail-nippers, nail-files, tweezers, &c.
- 9. Edge-tools and files used by engineers, smiths, or other metal workers.**

Steel, 1873.

10. Edge-tools and files used for purposes of building by masons, bricklayers, and plasterers.
11. Ditto for fine metal and other work, as for clock and watch-makers, jewellers, lapidaries, engravers, and modellers.
12. Ditto for woodwork, as for carpenters, joiners, cabinet-makers, coopers, wood carvers, &c.
13. Ditto for leather or skins, as for saddlers, curriers, shoemakers, and bookbinders.
14. Drawing, artists', and engraving instruments.
15. Edge-tools and files for other purposes than those specified.
16. Needles.

II. It is desired that the specimens contributed by foreign countries should be so selected as to illustrate the chief differences in manufacture and form between the English and foreign steel goods, as manufactured at the present date. Even imitations of English goods would prove interesting and instructive.

III. It is also proposed to form a collection of steel and steel goods manufactured at prior dates, so as to institute comparisons between the work and patterns of the present day and those of earlier times.

IV. It is hoped that all countries will voluntarily contribute collections of the nature proposed, but Her Majesty's Commissioners will be prepared to consider the purchase of specimens from such localities as are not likely to undertake their own representation officially, provided that an estimate is first sent to the Commissioners, and a definite sum authorised by them for the purpose before the purchase is made.

The articles exhibited in this class were shown in two different parts of the Exhibition. The light steel goods and cutlery were arranged in the four rooms over the south entrance from the conservatory to the Royal Albert Hall, on the balcony floor level; and the heavy goods (such as armour plate, boilers, railway iron, and steel rails, &c.) were placed in No. 26 room of the west galleries.

The collection comprised numerous specimens of the modern steel and cutlery manufactures of the country, and it was completed by loan contributions from the Science and Art Department, the Royal United Service Institution of London, the Royal Arsenal at Woolwich, and the chief railway companies in the United Kingdom.

The United States, Sweden, and Russia sent specimens of their steel and cutlery for exhibition alongside those of Sheffield; and the Royal Commissioners provided small inexpensive collections of the common characteristic cutlery used in Borneo, Ceylon, Natal, West Africa, Siam, Japan, and China.

G. E. GROVER, Captain R.E.

## APPENDIX XXX.

## SURGICAL INSTRUMENTS AND APPLIANCES. Class X., 1873.

## COMMITTEE.

Surgical  
Instruments,  
1873.

Sir William Fergusson, Bart.,  
F.R.S.  
Sir James Paget, Bart., F.R.S.  
Sir Alexander Armstrong,  
K.C.B., M.D.  
Sir T. Galbraith Logan, K.C.B.,  
M.D.  
Peter Allen, Esq., M.D.  
W. Bowman, Esq., F.R.S.  
R. Brudenell Carter, Esq.  
W. White Cooper, Esq.  
H. J. Domville, Esq., C.B.,  
M.D.  
W. T. Domville, Esq., M.D.  
Dr. Arthur Fane, F.R.S.

Dr. G. T. Gream.  
Cæsar H. Hawkins, Esq., F.R.S.  
Prescott G. Hewett, Esq.  
J. Hilton Esq., F.R.S.  
James Hinton, Esq.  
R. Liebreich, Esq.  
James Luke, Esq., F.R.S.  
A. E. Mackay, Esq., M.D.  
John Marshall, Esq., F.R.S.  
T. W. Nunn, Esq.  
Dr. W. S. Playfair.  
R. Quain, Esq., F.R.S.  
Edwin Saunders, Esq.  
Edwin Sercombe, Esq.

## CORRESPONDING MEMBERS.

Hon. Alan P. Herbert.  
Sir John Rose Cormack, M.D.  
Professor Donders.  
Dr. Helmholz.  
Theodor Hugenberger, Esq.,  
M.D.

Professor J. Lazarewitch.  
Professor D. E. Martin.  
Dr. de Mussey.  
Dr. D. Pantaleoni.

The following special rule was issued :—

I. Class 10 is divided into the following sections :

## SURGICAL INSTRUMENTS.

## A.—FOR OPERATIONS ON THE EYE.

Special instruments for

1. Operation on the eyelids.
2. Obstructed duct and fistula lachrymalis.
3. Strabismus.
4. Artificial pupil and iridectomy.
5. Cataract.
  - a. Knives, scissors, needles, hooks, forceps, &c.
  - b. Retractors, elevators, trocharts, canulas, sounds, &c.
6. Other operations on the eye.
7. Ophthalmoscopes.

Surgical  
Instruments,  
1873.

8. Apparatus for assisting sight and protecting the eyes, including—
  - a. Spectacles, lenses, eye protectors, shades.
  - b. Spray and other douches.

**B.—OPERATIONS ON THE EAR.**

Special instruments for

1. Exploration of the aural passages.
  - a. Sounds, catheters, speculums, otoscopes, &c.
2. The conveyance of air or liquid into the tympanic cavity.
  - b. Pneumatic and other syringes, in metal, glass, caoutchouc, &c.
3. The removal of foreign bodies from the meatus.
  - a. Levers, branch forceps, &c.
4. Operations on the membrana tympani.
5. The conduction of sound.
  - a. Including all kinds of acoustic instruments and contrivances, ear cornets, speaking trumpets, &c.

**C.—OPERATIONS ON THE NOSE, NASAL FOSSÆ AND MAXILLARY SINUS.**

Special instruments for

1. The removal of polypi.
  - a. Various forceps, porte-ligatures, serre-nœuds, speculums, rhinoscopes, &c.
2. The removal of extraneous substances.
3. The arrest of haemorrhage from the posterior nares.
  - a. Including all contrivances for plugging the nose.
4. Exploration and injection of the maxillary sinus.
  - a. Including sounds, catheters, &c.
5. Perforation and injection of the maxillary sinus.
  - a. Including drills, antrum syringes, plugs, &c.

**D.—OPERATIONS ON THE MOUTH AND PHARYNX.**

Special instruments for

1. Hare lip.
2. Operations on the teeth (dental instruments).
3. Myotomy and ligature of the tongue.
4. Cleft palate and other operations on the roof of the mouth (staphyloraphic instruments).
  - a. Including obturators, cleft and notched needles, palate holders, porte-sutures, &c.
5. Excision of the uvula and tonsils.
6. Cauterisation and other operations on the pharynx.
7. Salivary fistula.

**E.—OPERATIONS ON THE THROAT AND RESPIRATORY ORGANS.**

Instruments for

1. Tracheotomy and laryngotomy.
   
Including tracheotomes, springs and tubes, &c.
2. The removal of foreign bodies from the larynx, trachea, and bronchi.
3. Paracentesis thoracis (empyema) aspirators.

4. Various purposes.

- a. Including inhalers for the administration of chloroform, ether, nitrous oxide, and other medicinal vapours.
- b. Instruments used to restore suspended animation.
- c. Respirators in all materials.

5. Physical examination of the chest.

- a. Instruments for auscultation, percussion and admeasurement of the chest; stethoscopes and pleximeters in all materials; spirometers, stethometers, &c.

Surgical  
Instruments,  
1873.

F.—OPERATIONS ON THE ABDOMINAL WALLS AND ALIMENTARY CANAL.

Special instruments for

1. Stricture and other morbid states of the œsophagus, the removal of foreign bodies, &c.
  - a. Including œsophagal bougies and probangs in elastic gum and other materials, œsophagotomes, gullet-forceps, &c.
2. The introduction and withdrawal of fluids from the stomach; the removal of poison, &c.
  - a. The stomach pump and its appendages; enema syringes, &c.
3. The formation and maintenance of artificial anus.
  - a. Enterotomes; porte-sutures, &c.
4. Prolapsus ani.
  - a. All kinds of rectum-plugs in metal, elastic gum, &c.
5. Fistula, fissures, and vegetations in ano.
  - a. Fistula knives, directors, &c.
  - b. Porte-ligatures.
6. Hernia.
  - a. Instruments for its radical cure.
  - b. Trusses, and other artificial means of support.
7. Paracentesis abdominis.
8. Physical examination of the rectum.
  - a. Various speculums.

G.—OPERATIONS ON THE GENITO-URINARY SYSTEM IN THE MALE.

Instruments for

1. Lithotomy.
  - a. Including lithotomes, gorgets, staffs, forceps, scoops, &c.
2. Lithotrity.
  - a. Lithotrites.
  - b. Syringes, endoscopes, and instruments to inject and explore the bladder.
  - c. Dilators, sliding-scoops, and apparatus to remove calculi impacted in the urethra.

Instruments for lithectomy, &c.

3. Urinary fistula.
  - a. Including all urethroplastic instruments, urethrotomes, &c. for recto-urethral, perineal, and recto-vesical fistuæl.
4. Stricture, prostatic and vesical disease, and retention of urine.
  - a. Every variety of catheter, bougie, sound, porte-caustique, and urinal; trocars for puncture of the bladder.

Surgical  
Instruments,  
1873.

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5. Phimosis.
  - a. Apparatus employed by Jews.
  - b. By the medical profession.
6. Hydrocele.
7. Varicocele.
  - a. Including instruments for obliteration of the spermatic veins, as well as those for simple support; suspensory, and other bandages, scrotal rings, &c.

**H.—OPERATIONS ON THE GENITO-URINARY SYSTEM IN THE FEMALE.**

Instruments for

1. Exploration.
  - a. Including speculums in all materials, sounds, dilators, &c.
2. Operations on the uterus, vagina, and cervix uteri.
  - a. Hysterotomes; uterine scissors and dressing forceps (curved and straight), porte caustiques, &c.
3. Polypus uteri.
  - a. Vulsellum and other forceps, porte-ligatures, serre-nœuds, &c.
4. Prolapsus and procidentia uteri.
  - a. Including pessaries, bandages, and artificial supports of all kinds.
5. Vesico-vaginal fistula, and recto-vaginal fistula.
  - a. New instruments, urinary receptacles, &c.
6. Obstetrical purposes.
  - a. Including all midwifery instruments.
7. Ovariotomy.

**I.—OPERATIONS ON THE EXTREMITIES.**

Special instruments for

1. Amputations.
  - a. Army (portable) and hospital cases, bullet probes, bullet forceps, &c.
2. The adjustment of fractures.
  - a. Including splints, inclined planes, pads, slings, and bandages in all materials.
3. The reduction of dislocations.
  - a. Pulleys, rings, staples, &c.

**K.—OPERATIONS ON THE OSSEOUS SYSTEM.**

Special instruments for

1. Trepanning.
2. Resection and exarticulation.
3. The extraction of sequestra, the removal of caries, &c.
4. Keeping diseased joints at rest.

**L.—OPERATIONS ON THE VASCULAR SYSTEM.**

Instruments for

1. Venæsection.
  - a. Cupping instruments, lancets, leech tubes, &c.

2. The control of hæmorrhage.
  - a. Tourniquets, compressors, torsion forceps, &c.
3. Transfusion.
4. Aneurism.
  - By ligature. a. Aneurism needles, porte-ligatures, &c.
  - By compression. b. Various compressors.
5. Nævus.
  - a. Needles, porte-aiguilles, &c.
6. Varices.
  - a. Including elastic bandages, stockings, anclets, &c.
7. Sub-cutaneous injection.

Surgical  
Instruments,  
1873.

**M.—AUTOPLASTIC AND ORTHOPÆDIC OPERATIONS.**

Special instruments for

1. The various talacotian processes.
  - a. Rhinoplasty.
  - b. Cheiloplasty, &c.
2. Tenotomy, myotomy, and osteotomy.
  - a. Including long-bladed knives or saws for the sub-cutaneous division of muscles, tendons, fasciæ, and bones.
3. Mechanical compensation for lost parts.
  - a. Artificial eyes, noses, ears, chins, palates, teeth, hands, arms, legs, &c.
4. Orthopædic processes.
  - a. Including all orthopædic apparatus, back and leg boards and irons, stays, belts, supports, suspenders, boots, shoes for the cure of bunions.

**N.—DRESSING INSTRUMENTS.**

- a. Surgeons' pocket cases, and their usual contents; spring bistouries, tenaculums, scalpels, scissors, forceps, spatulæ, probes, and directors; needles, ligature-silks, antiseptic-ligatures, &c.

**O.—MISCELLANEOUS PHILOSOPHICAL APPARATUS APPLIED TO THE INVESTIGATION AND TREATMENT OF DISEASE.**

- a. Microscopes, laryngoscopes, sphygmographs, endoscopes, and lenses; urinometers and thermometers; volta-electric apparatus, galvanic cautery; various illuminating speculums; instruments in india-rubber for the application of cold; water-cushions for the reception of fluids of any temperature; spongio-piline; patent lint; plasters; collodion; antiseptic dressings and apparatus; nipple-shields; breast-pumps, &c.

**P.—SURGICAL TABLES, BEDS, COUCHES, MATTRESSES, CHAIRS, CRADLES, RESTS, SURGICAL APPARATUS APPLIED TO MILITARY PURPOSES, &c.**

**Q.—POST-MORTEM AND DISSECTING INSTRUMENTS, WITH INSTRUMENTS AND FLUIDS FOR EMBALMENT.**

**R.—INSTRUMENTS APPLIED TO VETERINARY PURPOSES.**

Surgical  
Instruments,  
1873.

The surgical instruments and appliances were arranged in glass cases in the small theatre over the west entrance to the Royal Albert Hall.

Eighty exhibitors contributed specimens of their manufactures, or selections from their collections, and prominent among these were the loan collections lent by the Royal College of Physicians, the Royal College of Surgeons, the Royal Medical and Chirurgical Society of England, University College, the Royal University of Berlin, the University of Marburg, the Japanese Government, the Russian Government, the Royal Commissioners, &c., &c.

Reproductions of the famous bronze surgical instruments disinterred from Pompeii had been made specially for the Exhibition by Signor A. Castellani of Rome, and the instruments of celebrated English surgeons, Liston, Abernethy, Dr. Chamberlen, &c., were added to the collection, to illustrate the history and progress of the manufactures, as well as for purposes of comparison with the most modern instruments made.

G. E. GROVER, Captain, R.E.

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### APPENDIX XXXI.

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Carriages,  
1873.

#### CARRIAGES. Class XI., 1873.

The Committee which acted for this class consisted of the following noblemen and gentlemen :—

The Duke of Beaufort, K.G.  
The Marquis of Downshire.  
Earl Poulett.  
Viscount Valentia.  
Lord Carington.  
Lord Francis Gordon Lennox.  
Lord Arthur Somerset.  
Captain H. Candy.  
Captain W. Chaine.

Colonel H. Dickson.  
Captain J. Harrison.  
Joseph Holland, Esq.  
H. M. Holmes, Esq.  
G. N. Hooper, Esq.  
Christobal de Murrieta, Esq.  
J. W. Peters, Esq.  
Thomas R. Stacey, Esq.

Committee appointed by the Worshipful Company of Coachmakers to confer and co-operate with H. M. Commissioners.

H. M. Holmes, Esq.  
John Holland, Esq.  
G. N. Hooper, Esq.  
G. Edwards, Esq.  
J. W. Peters, Esq.  
Joseph Peters, Esq.

W. T. Thorn, Esq.  
Professor A. Voelcker, Ph.D.,  
F.R.S.  
J. F. Woodall, Esq.  
G. A. Thrupp, Esq.

The following special rules were issued :—

Carriages,  
1873.

I. Carriages of all kinds will be exhibited, *i.e.*, omnibuses, cabs, carriages for the public service (not including military carriages, which will be exhibited in 1878), waggons, carts, barrows, &c., as well as the raw material, machinery, and processes used in their production.

II. Producers engaged in the various trades, such as the following, connected with the manufacture of carriages, may submit specimens of the particular work in which they are engaged.

Bath and invalid chair manufacturers.

Cab builders.

Carriage draughtsmen and designers.

Coach and axletree makers.

Coach body and carriage makers.

Coach body makers and benders.

Coach bolt and screw and nail makers.

Coach leather japanners and morocco dressers.

Coach lace and fringe makers.

Coach platers and beadlers.

Coach trimmers and silk manufacturers.

Coach and carriage lamp makers.

Coach interior fitting makers.

Coach spring makers.

Coach draughtsmen and lithographers and photographers.

Coach herald painters and monogram designers.

Coach spring-curtain barrel makers.

Coach varnish and japan makers.

Coach joiners and blind makers.

Coach carvers.

Coach iron and steel manufacturers.

Coach ivory workers.

Coach model makers.

Coach plate glass manufacturers.

Coach joiners.

As for as specially made for Coach makers.

Coach makers' silk manufacturers.

Coach makers' cloth manufacturers.

Coach makers' carpet manufacturers.

Coach makers' reps manufacturers.

Coach makers' floocloth manufacturers.

Coach painters and paint and colour manufacturers.

Coach smiths.

Coach wheelwrights and invalid carriage makers.

Morocco leather dressers.

Omnibus builders.

Perambulator makers.

Velocipede makers.

III. Her Majesty's Commissioners are particularly desirous of obtaining, if not specimens, at least models or drawings of such carriages as are peculiar to certain countries, such as the hackory and ekka of India, sledges, post carriages, and others.

IV. It is hoped that all countries will voluntarily contribute collections of this nature, but Her Majesty's Commissioners will be prepared to consider the purchase of objects from such localities as are not likely to undertake their own representation officially, provided that an estimate is first sent to the Commissioners, and a definite amount authorised by them.

So numerous were the applications to exhibit, which were received in reply to the circulars sent out to the Coachbuilding Trade in the United Kingdom, that when the Committee held their first meeting on the 23rd November 1872, it was even then evident that the available space would not accommodate all the carriages, &c. proposed for exhibition. The Committee therefore requested all intending exhibitors to send in their applications without delay, in order that it might be ascertained, at least approximately, what amount of extra space it would be necessary to provide. It was not, however, until the 5th February 1873 that, the application list being closed, the Committee were able to take the space question again into consideration. They then resolved that two carriages should be the maximum number to be shown free of cost by one exhibitor, and that every exhibitor desiring to exhibit more than two carriages should pay to H.M.'s Commissioners the sum of 10*l.* for every carriage above that number. By this means a fund was provided

Carriages,  
1873.

which enabled H.M.'s Commissioners to enclose the Eastern Arcade, and thus to provide space sufficient to accommodate all the carriages which had been proposed for exhibition.

This class was rendered more interesting than usual by the offer of prizes made by the Society of Arts for improved cabs. To compete for these prizes 16 cabs were exhibited, of which 11 were Hansom, and five were fourwheel cabs. The Committee appointed by the Society of Arts to award the prizes, after holding several meetings, awarded no first prize, but divided the total sum offered between three competitors. His Grace the Duke of Beaufort, K.G., actively presided over the labours of the Committee. The practical result of this exhibition has been the introduction of one or more new cabs into London, and considerable improvements in the usual vehicles, specially Hansoms.

The Coachmaker's Company took considerable interest in the exhibition, and at an early date appointed a Committee to assist H.M.'s Commissioners. They also voted a sum of 50*l.* towards meeting the expenses of obtaining a representative collection of photographs, both of ancient and modern carriages from all parts of the world. Owing to the exertions of British Ambassadors and Consuls abroad, a very interesting collection of photographs was obtained, which has since been transferred to the Hall of the Coachmaker's Company.

The class necessarily occupied a large amount of space, being arranged in the Eastern Arcade, the French Annexe,\* Rooms XXI. and XXII., South Galleries, South Corridor, and the Refreshment Vestibule. The carriages were received at three entrances, and were placed in position without trouble, although nearly the whole number was received in one day. The Vienna Exhibition interfered somewhat with the international character of the class, as will be seen from the following table of exhibitors:—

			Belgium.	Canada.	Ceylon.	France.	Japan.	Russia.	Turkey.	United States.	United Kingdom.	Total.
Ancient carriages	-	-	1	1	1	1	1	1	1	1	10	10
Materials, parts, and furniture, drawings, &c.			2	1	2	3	1	3	1	1	31	44
Carriages	-	-	1	1	—	4	1	2	—	—	104	111
			2	1	2	7	1	5	1	1	145	165

E. G. CLAYTON, Capt., R.E.

\* France declined to exhibit in 1873, being engaged at the Vienna Exhibition, but kindly placed its space at the disposal of Her Majesty's Commissioners.

## APPENDIX XXXII.

## FOOD. Class X., 1873.

Food, 1873.

This class, "substances used as food," was exhibited in the east and west upper quadrants. The machinery relating to it was shown in operation in the west gallery ground floor, and implements for eating and drinking were in the ground floor of the east gallery.

Five large Committees of noblemen and gentlemen were asked to assist in making the collections as perfect and complete as possible.

The Committee for *agricultural products and manurial substances used in cultivation* consisted of—

The Viscount Portman.  
The Lord Vernon.  
The Hon. E. K. Coke.  
James Buckman, Esq.  
W. Clearson, Esq.  
John Coleman, Esq.  
John Dent Dent, Esq.  
Dr. Gilbert.  
Dr. Robert Hogg.

C. Wren Hoskyns, Esq., M.P.  
J. Bennett Lawes, Esq.  
James Mason, Esq.  
J. C. Morton, Esq.  
Professor A. Voelcker, Ph.D., F.R.S.  
W. Wells, Esq., M.P.  
G. F. Wilson, Esq., F.R.S.  
Edward Wilson, Esq.  
J. A. Youl, Esq.

The Committee for "grocery, drysaltery, and preparations of food," consisted of—

The Earl of Leicester.  
Lord A. Churchill.  
Lord de L'Isle and Dudley.  
The Lord Vernon.  
The Right Hon. Henry A. Bruce, M.P.  
The Hon. E. K. Coke.  
Sir C. Nicholson, Bart.  
Sir W. H. Bodkin.  
Sir Antonio Brady.  
F. A. Abel, Esq., F.R.S.  
H. Ancell, Esq.  
Professor Bentley.  
Phillips Bevan, Esq.  
Dr. Blakiston.  
T. F. Blackwell, Esq., Jun.  
J. S. Budgett, Esq.  
Dr. A. Campbell.  
Hyde Clarke, Esq.  
J. J. Colman, Esq., M.P.  
Sedgwick S. Cowper, Esq.  
R. M. Curtis, Esq.  
E. G. Davenport, Esq.  
J. Duncan, Esq.  
Rev. J. E. Hall.  
Reginald Hanson, Esq.  
William Hawes, Esq., F.R.S.  
T. Hicks, Esq.  
C. Wren Hoskyns, Esq., M.P.  
E. W. Larner, Esq.

Frederick Machin, Esq.  
J. J. Manley, Esq.  
D. Martineau, Esq.  
W. H. Michael, Esq.  
G. Moffatt, Esq.  
J. C. Morton, Esq.  
E. C. Nicholson, Esq.  
W. J. Palmer, Esq.  
H. W. Peek, Esq., M.P.  
Dr. Pitman.  
C. S. Read, Esq., M.P.  
W. Reed, Esq.  
S. Redgrave, Esq.  
F. W. Rowsell, Esq.  
E. B. Saville, Esq.  
Benjamin Shaw, Esq.  
A. Steains, Esq.  
P. L. Simmonds, Esq.  
Charles Southwell, Esq.  
J. Taylor, Esq.  
Seymour Teulon, Esq.  
E. C. Tufnell, Esq.  
J. T. Ware, Esq.  
J. Forbes Watson, Esq., M.A., M.D.  
Edward Wilson, Esq.  
G. F. Wilson, Esq., F.R.S.  
G. W. Yapp, Esq.  
J. A. Youl, Esq.

This Committee was appointed by the Society of Arts, and P. Le Neve Foster, Esq., acted as the secretary.

Food, 1873. The Committee for "implements of all kinds for drinking and for the use of tobacco, consisted of,—

Sir William Drake.	C. Drury Fortnum, Esq.
W. Bragge, Esq.	A. W. Franks, Esq., M.A., F.S.A.
C. Minton Campbell, Esq.	J. Dunn Gardner, Esq.
A. S. Cole, Esq.	F. W. Moody, Esq.
J. G. Crace, Esq.	R. H. Soden Smith, Esq., F.S.A.
Henry Durlacher, Esq.	R. A. Thompson, Esq.
T. Dyer Edwardes, Esq.	Dr. Thudicum.
J. Evans, F.R.S., F.S.A.	T. M. Whitehead, Esq.

This Committee acted also for ancient objects generally.

Fish.

A fish museum had existed in the south-west galleries ever since the commencement of the Exhibition, and the opportunity was taken of making this more interesting from the "food" point of view, and a special Committee for *fish in connexion with food*, was invited to give assistance; the members were—

The Marquis of Exeter.	J. W. Willis Bund, Esq.
The Earl Nelson.	Charles Hambro', Esq., M.P.
The Vicount Kirkaldie.	P. Hood, Esq., M.D.
The Lord Saltoun.	T. R. Sachs, Esq.
The Lord Abinger.	F. Wiseman, Esq.
Frank Buckland, Esq.	Henry Wright, Esq.

Her Majesty's Commissioners voted the sum of 50*l.* towards providing aquaria for showing edible fish, and Mr. Frank Buckland succeeded in adding considerably to the attractions of the museum.

The Rules which were issued to the trade contained the following special clauses :—

Class XII. is divided into the following sections, and producers of substances used as food, or of machinery connected with its production, may submit specimens for exhibition, or exhibit processes in operation :—

Agricultural Products.

Section a.—AGRICULTURAL PRODUCTS.

RAW MATERIAL.

Corn dealers.	Salesmen of artificial food.
Refuse products from seeds, <i>i.e.</i> , linseed cake, rape cake, palm-nut, meal.	Salesmen of condimental food.
Roots as substitutes for food, as yams, artichokes, &c.; cryptogamic plants, fungi as food, sea-weed, &c.	Salesmen of fruit.
Hop merchants.	Salesmen of potatoes.
Market gardeners.	Salesmen of butter.
Materials used for manure.	Salesmen of watercresses.
Orange merchants.	Seed merchants.
	Seedsmen (to supply the weights with seeds as well as price).

Grocery, &c.

Subsection b.—GROCERY, DRY SALTERY, AND PREPARATIONS OF FOOD.

MATERIAL.

Arrowroot dealers.	Cocoa-butter manufacturers.
Bacon driers.	Cocoa merchants.
Baking powder makers.	Cocoa nut merchants.
Biscuit makers.	Coffee dealers (wholesale only).
Bread and milk flour manufacturers.	Coffee essence manufacturers.
Butermen.	Coffee finings manufacturers.
Cheesemongers (wholesale only).	Coffee growers.
Chocolate and cocoa manufacturers.	Coffee roasters.
Cochineal merchants.	Confectioners (wholesale only).

Corn flour manufacturers.	Pearl barley producers.	Food, 1873.
Drysalters.	Pickle makers.	
Fish curers.	Preserved provision merchants.	
Ginger bleachers.	Provision merchants (for sago, tapioca, semolina, vanilla, truffles, pickles, jam, &c.).	
Groat manufacturers.	Rice merchants.	
Grocers (wholesale only).	Sauce makers.	
Ham and tongue dealers.	Ship-biscuit bakers.	
Ice merchants.	Soda merchants.	
Isinglass importers.	Spice merchants.	
Italian warehousemen.	Tea dealers (wholesale only).	
Lime juice merchants.	Vinegar makers.	
Maccaroni importers.		
Mustard manufacturers.		

MACHINERY.	Machinery.
Chocolate and cocoa manufacturers' machine makers.	Ice mould makers.
Cheese press makers.	Ice pail makers.
Churn makers.	Meat safe makers.
Coffee roaster makers.	Orange peel cutters' tool makers.
Freezing machine makers.	Refrigerator manufacturers.
Grocers' machinists.	Sugar refiners.
Bakers.	Millers' machinery makers.
Baking powder makers.	
Biscuit bakers.	
Bread and milk flour manufacturers.	
Butermen.	
Cheese makers.	
Cocoa-butter manufacturers.	
Coffee essence manufacturers.	
Coffee finings manufacturers.	
Coffee roasters.	
Confectioners (wholesale only).	
PROCESS.	Food processes.
Corn flour manufacturers.	
Freezing machine makers.	
Ginger bleachers.	
Groat manufacturers.	
Lard refiners.	
Orange peel cutters.	
Rice cleaners.	
Ship-biscuit bakers.	
Sugar refiners.	
Vinegar makers.	

## Subsection c.—WINE, SPIRITS, BEER, AND OTHER DRINKS, AND TOBACCO.

Wine, Beer,  
&c., Tobacco.

MATERIAL.	
Brewers.	Maltsters.
Brewers' druggists.	Snuff manufacturers.
Brewers' pure malt saccharine manufacturers.	Soda water and ginger beer manufacturers.
British wine manufacturers.	Spirits of wine manufacturers.
Capillaire, wine and spirit colouring makers.	Tobacco merchants.
Capsule makers.	Tobacco manufacturers.
Cigar importers.	Whiskey merchants.
Cork makers.	Wine bin manufacturers.
Dantzig spruce importers.	Wine cooler makers.
Distillers.	Wine fining makers.
Fruit syrup manufacturers.	Wine merchants (wholesale and retail).

MACHINERY.	
Beer engine makers.	Malt roaster makers.
Brewers' machinery makers.	Malt whiskey distillers' machinery.
Brewers' pure malt saccharine manufacturers' machinery.	Soda water and ginger beer manufacturers' machinery.
British wine manufacturers' machinery.	Soda water engine and machine manufacturers.
Cider press makers.	
Distillers' machinery.	

PROCESS.	
Brewers.	Malt whiskey distillers.
Brewers' pure malt saccharine manufacturers.	Rectifiers.
British wine manufacturers.	Snuff manufacturers.
Capsule makers.	Soda water and ginger beer manufacturers.
Cider and perry merchants.	Spirits of wine manufacturers.
Cigar, British and Foreign, manufacturers.	Tobacco manufacturers.
Distillers.	Wine fining makers.
Fruit syrup manufacturers.	Wine growers.

Food, 1878. Subsection d.—**IMPLEMENTS OF ALL KINDS FOR DRINKING.**\* [These will be limited to specimens exhibited for peculiarity of shape or suitability to different kinds of drinks. As mere glass or metal manufactures, they do not come under this section, but will form classes in 1874, 1876, and 1878] AND **IMPLEMENTS FOR THE USE OF TOBACCO.**

Implements for drinking.

China and glass makers of novel implements.	Match and fusee makers.
Cigar box makers.	Meerschaum pipe makers.
Cigar case makers.	Pewterers.
Electro plate manufacturers.	Silversmiths.
Goldsmiths.	Snuff-box makers.
	Tobacco pipe makers.

Agricultural products.

In section a, i.e., agricultural products, the collection exhibited was a small, but interesting one; the number of exhibitors were as follows:—

Great Britain	-	-	15	Algeria	-	-	1
Russia	-	-	5	Belgium	-	-	1
Denmark	-	-	2	America	-	-	1
France	-	-	1	Italy	-	-	1

These objects constituted section B, i.e.—

Grocery, &c.

*Grocery, drysaltery, and preparations of Food.*—Great efforts were made by the Society of Arts Committee to bring together as good a show as possible. On behalf of the South Kensington Museum Dr. Frankland, with Mr. J. Bell, made a collection of teas, coffees, chicory, cocoa, flour, oatmeal, farinaceous foods, peppers, cayenne, spices, mustard, preserves, honey, potted meats, calf's-foot jelly, pickles, milk, butter, confectionery, lime juice and lemon juice, beer, whiskey, brandy, rum, gin, wines, vinegars, tobacco, pure, prepared, and adulterated. Illustrations of the ingredients contained in the water supplied to London from the Rivers Thames and Lea, and from deep wells in the chalk at Deptford. Ingredients contained in the water from Loch Katrine. Ingredients contained in the water supplied to Balmoral Castle from the Rabate fountain were also shown by these gentlemen.

The number of exhibitors in section B were as follows:—

Great Britain	-	-	140	Denmark	-	-	6
Australia	-	-	3	Belgium	-	-	4
France	-	-	27	Italy	-	-	2
Algeria	-	-	2	Spain	-	-	2
Russia	-	-	25	America	-	-	1
Norway and Sweden	-	-	14				

Special pains were taken to procure the exhibition of *machinery connected with food*, and Mr. E. J. Craigie, who assisted in the class of food generally, was employed for several months in getting together a collection of machines and processes to be worked in the galleries.

The smaller apparatus and processes were exhibited in the east and

\* These are limited to vessels which are put to the mouth, and do not include jugs, decanters, bottles, &c.

west quadrants, whilst the larger machines were in the west lower gallery. Food, 1873.  
These rooms presented a busy scene.

Machines for making confectionery were shown in operation by three exhibitors.

Aerated water making and bottling was shown by four exhibitors. Processes for making preserves were shown by two exhibitors. The manufacture of mustard by machinery was shown by one exhibitor. Meat preserving was exhibited by one firm, and one exhibitor showed the operation of roasting coffee. An Italian firm exhibited in a very complete manner the manufacture of macaroni. All these machines and processes were a source of considerable attraction to visitors, and especially interested the Shah of Persia on his visit to the Exhibition. Special arrangements were made with the refreshment contractors to procure for the public the privilege of tasting preparations of food manufactured in the building. On the recommendation of the committee for wine, spirits, beer, and other drinks, and tobacco, an endeavour was made to arrive at an arrangement between exhibitors and the refreshment contractors to enable the public to taste wine, &c. exhibited in the building, but the contractors, who had the sole right of providing the visiting public with refreshments, did not find it their interest to offer terms which were in any case accepted by exhibitors of wine, &c. The rights of the contractors did not extend to tobacco, so that visitors were able to purchase pipes, cigars or cigarettes, which were made in the Exhibition.

In this section the number of exhibitors was as follows:—

Great Britain	-	-	71	}	Austria	-	-	-	6
Australia	-	-	4	}	Italy	-	-	-	5
France	-	-	53	}	Denmark	-	-	-	5
Algeria	-	-	3	}	Holland	-	-	-	3
Norway and Sweden	-	16			Spain	-	-	-	2
Belgium	-	-	10		Portugal	-	-	-	1
Russia	-	-	8		Switzerland	-	-	-	2
Germany	-	-	6						

Two exhibitors showed the process of making pipes. Two made cigarettes, and one firm exhibited the manufacture of cigars and tobacco.

In the fourth section of the food class, *i.e.*—

“*Implements of all kinds for drinking, and tobacco.*”—Objects, modern and ancient, were exhibited in almost every material, skin, leather, wood, earthenware, china, and metal. Collections of characteristic implements were purchased by Her Majesty’s Commissioners from Denmark, Algeria, Switzerland, Austria, Hungary, Italy, Germany, Greece, France, and America. The Indian Government made an interesting show of hukahs and pipes in the Indian court. The authorities of the

Implements for  
drinking, and  
tobacco.

Food, 1873. South Kensington Museum sent a fine collection of old pipes, German, French, and Italian, and several private owners lent collections, among which that of Mr. W. Bragge was very remarkable, being a complete collection of all kinds of pipes, tobacco graters, snuff boxes and pouches from every country. There was also a small show of modern drinking implements contributed by manufacturers. The total number of exhibitors in this section was 128.

(Signed) H. H. COLE, Lieut. R.E.

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### APPENDIX XXXIII.

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Cooking and its  
Science, 1873.

### COOKING AND ITS SCIENCE. Class XIII., 1873.

The Committee for this class consisted of:

Hon. F. Leveson Gower, M.P., Chairman.	
F. B. Alston, Esq.	Victor C. de Rivaz, Esq.
James Bateman, Esq., F.R.S.	Dr. Smith, F.R.S.
Dr. George Birdwood, M.D.	W. Follett Synge, Esq.
Colonel Browne, C.B., R.E.	Dr. Thudicum.
Major Du Cane, C.B., R.E.	Professor Voelcker.
Captain Home, R.E.	Captain F. Warren, R.N.
Major-General Lysons, C.B.	Major Webber, R.E.
Dr. Lyon Playfair, C.B., M.P., F.R.S.	E. Wilson, Esq.

Various sub-committees were formed, *i.e.*, for cooking apparatus, for the school of cookery, and for novelties in cooking, but the most attention was directed to the school of cookery, and to the exhibition of cooking ranges and appliances.

The Sub-committee for the School of Cookery held between 8th February and June 16th 15 meetings. The difficulties which presented themselves were numerous, and many plans had to be discussed before any practical conclusions could be arrived at. The principle adopted from the first was that there should be demonstrations in the school of cooking suited to the wants of the working and middle classes.

The Committee first determined to engage the services of a professional man cook, and several meetings were held to examine testimonials, and see the various candidates. An early problem lay in the compilation of a list of the sort of dishes the cooking of which should be demonstrated. Soon after, M. de Rivaz, one of the members of the Committee, drew up a number of recipes, which were printed in the form of a small pamphlet.

The following is a list of books, &c. from which the recipes were selected:—

- 1 "The English Art of Cookery," by Richard Briggs; London : G. G. & J. Robinson, 1794.
- 3 "The Cook's Oracle," (Dr. Kitchener); Edinburgh : Constable & Co., 1822.
- 7 "The Book of Household Management," by Mrs. Beeton; London : S. O. Beeton, 248, Strand, 1861.
- 11 "The Modern Housewife, or Ménagère," by Alexis Soyer; London : Simpkin, Marshall, & Co., 1861.
- 4 "The Cook and Housewife's Manual," by Mrs. Margaret Dods; Edinburgh : Oliver & Boyd; London : Simpkin, Marshall, & Co., 1862.
- 9 "Cre-Fydd's Family Fare;" London : Simpkin, Marshall, & Co., 1864.
- "The Cooks' Guide," by Charles Elmé Francatelli; London : Richard Bentley, 1865.
- 1 Receipts collected by Lady Harriet St. Clair; London : Edmonston & Douglas, 1866.
- 12 "Modern Cookery," by Eliza Acton; London : Longman, Green, Reader, & Dyer, 1868.
- 8 "The Royal Cookery Book," by Jules Gouffé, translated by Alphonse Gouffé; London : Sampson, Low, Son, & Marston, 1869.
- 3 "The New Cookery Book," by Anne Bowman; London : George Routledge & Co., 1869.
- 11 "Warne's Model Cookery," compiled and edited by Mary Jewry; London : Frederick Warne & Co.
- 1 Recipes for cooking Australian meat, by a Cook; London : Chapman & Hall, 1872.
- 19 "Round the Table," by "The G. C.;" London : Horace Cox, 346, Strand, 1872.
- 36 Recipes in "The Queen" Newspaper.
- 5 Lolato.
- 2 Homely Cookery.

Total 140 recipes.

At a meeting of the Committee, held on the 5th June, it was arranged to modify some of the recipes in the printed book, and to print the modifications and additions on fly leaves, which could be distributed at the lectures.

In considering the kind of ranges and cooking utensils which should be used in the lecture room, the Committee were inclined to use only the most simple and economical kinds; but when the practical question came of

*Cooking and its Science, 1873.* finding the most suitable apparatus for the purposes of demonstration in a large lecture room, it was found necessary to use some apparatus of a rather more ambitious nature than that ordinarily used by the middle classes. After the engagement of a head cook a number of cooks and kitchen maids were employed to carry out the cooking operations under his instructions. Two members of the Committee were appointed to take it in turns to attend each public lecture. After the opening of the Exhibition it became necessary to reduce the expenses of the School, and the services of the head cook were dispensed with, those of a female cook being engaged instead.

Cooking apparatus of all kinds, from the smallest cottage cooking stoves to the largest kitcheners, were exhibited in the south gallery, Room XXIII., and this section of the cooking class acquired much increased importance and interest from the high price of fuel, a topic then creating serious discussion as a national question.

There were some 35 British exhibitors of different kinds of cooking apparatus; out of these 28 contributed domestic apparatus, five apparatus for cooking in the army, and two apparatus for cooking in the navy. These exhibitors contributed Swedish cooking apparatus, and one American stoves.

*Lectures on cookery.*

After the Committee had approved of the plan for laying out the iron shed on the east side as a lecture room and school of cookery, the works were put in hand under the direction of Captain Grover, and on the 2nd April were sufficiently advanced to enable an experimental demonstration to be made before the Committee. Mr. Buckmaster, who had been engaged as lecturer on this occasion, gave verbal explanations of what the cooks prepared, and continued to be the lecturer until the close of the Exhibition. The programme of the lectures and demonstrations varied every week, and was announced in the Exhibition daily. The public were admitted to each lecture on payment of 6d. A reserved seat, with privilege of tasting, was to be had for an additional 6d. After the school had been in operation some time on the demonstration of artizan and middle-class cooking, the Committee expressed a desire to reserve one day in the week for high-class cooking, and accordingly in June it was arranged to have lectures on high-class cooking every Wednesday.

*German military cooking.*

Owing to the interest taken in the Exhibition by H.I.H. the Crown Prince of Prussia, two serjeants of the German army were sent to the Exhibition to show the process of camp cooking as practised in the army; the demonstrations were given at the conclusion of each lecture on popular cookery, and preceded by a short description from Mr. Buckmaster.

H. H. COLE, Lieut. R.E.

## APPENDIX XXXIV.

## MACHINERY. 1873.

*Prime Movers.*—On a review of the machines and processes requiring motive power during the Exhibition of 1873, it was found that but five prime movers would be required to work the main shafting in the five west machinery galleries.

Machinery,  
1873.

The east annexe, between the main buildings and Exhibition Road, was this year assigned to the "School of Popular Cookery"; and obviously the manufacture of steel, or surgical instruments, or carriages, could hardly be carried out in instructive publicity.

Thus silk, food, and scientific inventions, formed the staple subjects of exhibited processes and machinery. These were all displayed in the five west ground floor rooms; and motive power was supplied, as heretofore, by five small engines in the glass engine houses built as lean tos to the main galleries. Access was this year made possible from the galleries to the engine-rooms, by the removal of the intervening windows and walls beneath, so that a convenient doorway was formed between each engine room and the machinery gallery it served.

*Silk Processes and Machinery.*—The entire process of rearing silk-worms was shown in a detached house, or "Maganerie," near the N.W. door of No. 1 room; and this room contained many machines, exhibited in motion, for silk-reeling from cocoons, and for the subsequent processes of throwing, cleaning, doubling, and spinning. It was impossible to show the process of silk-dyeing in the Exhibition; but there were several looms in this No. 1 room, illustrating the final operation of weaving.

*Food Machinery.*—The machinery and processes connected with the preparation of food (Class XII.) occupied rooms II., III., and IV. They comprised many curious methods of manufacturing sundry articles of food and drink (e.g., confectionery, coffee-roasting, aërated waters, marmalade, flour disintegration, macaroni, cooking of Australian preserved meats, &c. &c.) which were easily provided for, from the motive-power point of view, since they required comparatively little force for their machines.

*Scientific Inventions.*—The Scientific Inventions (of Class 14), which required motive power, were placed in the room No. 5, the southernmost of the west machinery galleries. Many of them required considerable power, such as the diamond rock-boring machinery, stone-breaking machines, the Tilghman process of grinding glass, &c. by air blast, the Wyon medal-striking press, and the printing machine which produced the daily "Key," containing all the Exhibition news and programmes.

G. E. GROVER, Captain R.E.

## APPENDIX XXXV.

Scientific  
Inventions,  
1873.

## SCIENTIFIC INVENTIONS. (Division III., Class XIV.) 1873.

The Committee for this year were as follows :—

F. A. Abel, Esq., F.R.S.	John Hick, Esq., M.P.
J. Anderson, Esq., LL.D., F.R.S.	J. Norman Lockyer, Esq., F.R.S.
C. F. Beyer, Esq.	John Penn, Esq., F.R.S.
Major Frank Bolton.	Dr. D. S. Price.
F. J. Bramwell, Esq.	John Ramsbottom, Esq.
Captain Hans Busk.	Professor Roscoe, F.R.S.
Captain Colomb, R.N.	C. W. Siemens, Esq., D.C.L., F.R.S.
Major W. Crossman, R.E.	T. Sopwith, Esq., M.A., F.R.S.
Major Donnelly, R.E.	Lt.-Colonel A. Strange, F.R.S.
Major E. F. Du Cane, C.B.	Professor J. Tyndall, LL.D., F.R.S.
Sir W. Fairbairn, Bart., LL.D., F.R.S.	C. B. Vignoles, Esq., F.R.S.
Professor E. Frankland, D.C.L., F.R.S.	Sir Charles Wheatstone, D.C.L., F.R.S.
Professor T. M. Goodeve, M.A.	
Major-General Harness, C.B.	

The large machines and processes of the "scientific inventions" class in the Exhibition of 1873, were placed in No. 5 room of the west machinery galleries, where motive power was conveniently supplied by one of the prime movers in the engine-house built adjoining to the gallery.

Considerable power was necessary for some of these machines, notably the diamond rock-boring machine, stone-breaking machinery, Tilghman's sand blast engraving process, Wyon's medal-striking press, Johnson and Sons' printing machinery, &c. &c., but the smaller machines and models were placed in the two south rooms of the Royal Albert Hall (usually termed "crush rooms") near the south entrance from the conservatory.

Since the class purported to consist solely of objects whose excellence and novelty would be considered by the Committee to be so great as to render it undesirable that their introduction to the public should be delayed until the proper year for their exhibition in a class of industrial manufactures, its exhibits were chosen with difficulty. Many unaccepted inventors were naturally disappointed, and the result was not often impressive. Yet the practical usefulness of the class was undeniable, and the many practical illustrations of useful discoveries and inventions shown in the Exhibition of 1871 naturally detracted from the number and importance of objects displayed in the same class in subsequent

Scientific  
Inventions,  
1873.

years of the International Exhibitions. Twelve months constitute a very short interval in the progress of modern invention and discovery.

On the 27th May 1873, the annual conversazione of the President of the Institution of Civil Engineers was, as in the last year, held in the west galleries of the Exhibition buildings, and again some models and objects from the scientific inventions court were temporarily transferred for the occasion to the galleries thrown open to visitors. The council's annual report,\* in complimenting upon "the brilliant meeting with " which the session terminated," remarks that "many of the more im- " portant articles were transferred from the scientific inventions court, " and a few models,—interesting though not numerous,—were specially " contributed. The exhibitors of the machines and mechanical processes " were entirely imbued with the spirit of the entertainment, demon- " strating and explaining the details of their work; and their efforts " were effectively supplemented by various members of the Institution. " The arrangements were all that could be desired."

G. E. GROVER, Capt. R.E.

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## APPENDIX XXXVI.

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### LACE, ANCIENT AND MODERN. Class VIII., 1874.

Lace, Ancient  
and Modern,  
1874.

The Commissioners issued the following general rules for representation of this class:—

1. Under the class of lace to be represented at the London International Exhibition of 1874, it is the desire of Her Majesty's Commissioners to secure collections of both modern and ancient workmanship, in order that the public, as well as those professionally interested in the subject, may have the means of studying the history of the art. The formation of the modern collections, and especially those illustrating manufactures, will be dealt with under the advice of a committee of the following gentlemen, with power to recommend additions to their number:—

A. C. Biddle, Esq.

John Hunt Gosling, Esq.

R. Birkin, Esq.

J. Hartshorn, Esq.

John Brown, Esq.

Mr. Alderman Stone.

2. The class of lace is held to comprise—

a. Pillow lace, the article or fabric being wholly made by hand (known as Valenciennes, Mechlin, Honiton, Buckingham); or Guipure, made by the crochet needle; and silk lace, called

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\* Proceedings Inst. C.E., vol. xxxvi., p. 255; vol. xxxvii., p. 184.

Lace, Ancient  
and Modern,  
1874.

“blonde” when white, and Puy, Grammont, Normandy, and Black Buckingham, when black.

- b. Lace, needle-made ; Brussels (Point Gaze), and Point d'Alençon, the ground and flowers of which are entirely worked by the needle.
- c. Lace, the ground being machine-wrought, the ornamentation made on the pillow, and afterwards applied to the ground (known as Brussels, Honiton, or Appliquée lace).
- d. Machine-made nets and quillings, wholly plain, whether warp or bobbin (known as bobbin net, tulles, blondes, Cambric, Mechlin, Malines, Brussels, Alençon, &c.).
- e. Lace, the ground being wholly made by machine, partly ornamented by machine and partly by hand, or wholly ornamented by hand, whether tamboured, needle-embroidered, or darned.
- f. Lace, actually wrought and ornamented by machinery, comprising trimming, laces of every description, veils, falls, scarfs, shawls, lappets, curtains, &c.
- g. Lace made of wool, from Le Puy.
- h. Barcelona lace and black Maltese.

3. Her Majesty's Commissioners will grant space and afford facilities for the exhibition of the different kinds of processes worked either by hand or by machinery in the galleries of the Exhibition.

Committee for  
ancient lace.

4. The committee for lace above mentioned will act also as a committee of selection ; but, as regards specimens of ancient lace, the following committee of ladies will decide as to the admissibility of the specimens offered on loan to the Exhibition :—

H.R.H. the Princess Christian.	The Countess of Bradford.
H.R.H. the Princess Louise, Mar- chioness of Lorne.	The Countess Somers.
H.R.H. the Princess Mary Adelaide, Duchess of Teck.	The Countess of Cawdor.
The Princess Teano.	The Countess Brownlow.
The Duchess of Marlborough.	The Countess Spencer.
The Duchess of Northumberland.	The Lady Sophia Des Voeux.
The Marchioness of Bute.	The Lady Cornelia Guest.
Louisa, Marchioness of Waterford.	The Lady Marian Alford.
The Marchioness of Exeter.	The Lady Charlotte Schreiber.
The Marchioness of Bristol.	The Lady Susan Melville.
The Countess of Shrewsbury.	The Lady Dorothy Nevill.
The Countess De la Warr.	The Lady Louisa Egerton.
The Countess of Carnarvon.	The Lady Wharncliffe.
The Countess of Warwick.	The Lady Chesham.
The Countess of Kenmare.	The Lady Fitzhardinge.
	The Lady Hamilton Gordon.
	The Hon. Mrs. Percy Wyndham.

The Hon. Mrs. Welby.	Mrs. Holford.	Lace, Ancient and Modern, 1874.
Lady Lindsay.	Mrs. Maccallum.	
Lady Wyatt.	Mrs. Alfred Morrison.	
Lady Drake.	Mrs. Bury Palliser.	
Mrs. Hailstone.	Mrs. Henry Reeve.	

The committee of ladies subsequently recommended the adoption of the following decisions:—

- a. The loan exhibition of lace will include specimens of lace made before 1815, and will comprise,—*a.* Pillow lace, the fabric being made wholly by hand (known as Valenciennes, Mechlin, Honiton, Buckingham); guipure; silk lace, called blonde when white, and Chantilly Puy, Grammont, and black Buckingham, when black.  
*b.* Lace, needle-made; Brussels (Point Gaze); and Point d'Alençon, Venetian point, &c. *c.* Lace made of gold, silver, and coloured thread.
- b. A case will be reserved for the exhibition of Italian, German, French, and English old sampler lace books.
- c. The arrangement of the loans will be personally superintended by a sub-committee of the Ladies' General Committee.

As regards modern lace, the committee met twice before the opening of the Exhibition, and made various recommendations for obtaining specimens of all kinds of British and foreign machine and hand-made lace, and specially recommended the Commissioners to obtain one or more lace machines, and to engage the services of workwomen to show the process of making hand-made lace in the Exhibition.

Under the instructions of the Board of Management, I attended a meeting of the Nottingham Chamber of Commerce, when a resolution was passed agreeing to make a collective exhibition of Nottingham machine laces. In January a deputation from the Chamber of Commerce, consisting of Mr. Henry Heyman and Mr. Owen Donald, came to confer with the executive officers of the Exhibition, and through their co-operation and efforts a lace machine, made by Mr. William Stone, of Lenton, near Nottingham, was obtained and worked in the machinery galleries for the first time in any International Exhibition. The number of exhibitors of modern laces was as follows:—

Great Britain	-	90	Greece	-	-	3
Russia	-	10	Italy	-	-	2
Belgium	-	8	Germany	-	-	2
France	-	6	Malta	-	-	1
Sweden	-	5	Brazil	-	-	1
Austria	-	4	Switzerland	-	-	1

**Lace, Ancient  
and Modern,  
1874.**

Modern lace.

Ancient lace.

The modern lace was exhibited in the north end of Room XIV., whilst the collection of machine lace exhibited by the Nottingham Chamber of Commerce was shown in Room XV. Two workwomen, one from Belgium and the other from Honiton, showed the process of making pillow-lace in the west upper quadrant. H.I.H. the Duchess of Edinburgh contributed a collection of interesting modern Russian laces, together with patterns and photographs of Russian laces of various periods.

The collection of ancient lace constituted the chief attraction of the class of lace. 107 lenders exhibited specimens of all kinds and periods, and, owing to the interest taken by H.R.H. the Princess Christian and the members of the ladies committee, so perfect and interesting a gathering had never before been accomplished.

Monsieur Dupont Auberville lent a collection of lace arranged in a precise chronological order. It was displayed in two large stands of radiating frames, and included specimens of early 14th century cut linen work, specimens of 15th century Italian point, and examples of better known laces, both needle, point, and pillow, dating from the 16th century to the commencement of the 19th century. A portion of Mrs. Hailstone's valuable series of laces was also lent and exhibited. His Grace the Duke of Devonshire contributed some rare and interesting examples. Lady Marian Alford, the Countess of Brownlow, Lady Dorothy Nevill, Mrs. Bolckow, Mrs. Austen, Mrs. Alfred Morrison, and Mrs. MacCallum lent many important specimens. By permission of the owners, photographs of many notable pieces of lace were taken, and have since been published in a work on lace, compiled by Mr. Alan S. Cole, the Honorary Secretary to the Ladies Committee, and issued by the Arundel Society.

H. H. COLE, Lieut. R.E.

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### APPENDIX XXXVII.

**Civil Engineer-  
ing, 1874.**

### CIVIL ENGINEERING. Class IX., 1874.

The following influential Committee was appointed :—

The Earl of Caithness.	James Allport, Esq.
The Lord Rayleigh.	W. Baller, Esq.
The Lord Robert Grosvenor, M.P.	C. Bailey, Esq.
Sir Donald Campbell, Bart.	W. H. Barlow, Esq.
Sir Joseph Whitworth, Bart., F.R.S.	J. F. Bateman, Esq., F.R.S.
Sir William Armstrong, C.B., F.R.S.	J. Bird, Esq.
Sir John Coode.	J. Blyth, Esq.
Sir John Hawkshaw, F.R.S.	F. J. Bramwell, Esq., F.R.S.
Sir G. Gilbert Scott, R.A., P.R.I.B.A.	T. Brassey, Esq., M.P.

W. Clode, Esq.	D. Kirkaldy, Esq.	Civil Engineer- ing, 1874.
C. Comfort, Esq.	Mr. Alderman W. Lawrence, M.P.	
J. G. Crace, Esq.	C. T. Lucas, Esq.	
G. Dines, Esq.	T. Lucas, Esq.	
J. Douglass, Esq.	C. Manby, Esq., F.R.S.	
Lieut.-Col. Du Cane, C.B., R.E.	W. Marwick, Esq.	
J. Elger, Esq.	J. Moreland, Esq.	
J. Fowler, Esq.	R. Moreland, Esq.	
Capt. Douglas Galton, C.B., F.R.S.	W. G. Owen, Esq.	
Colonel Gallwey, R.E.	Colonel Pasley, R.E.	
C. Gatliff, Esq.	W. Poll, Esq., F.R.S.	
G. Godwin, Esq., F.R.S., F.S.A.	W. S. Portal, Esq.	
J. Grant, Esq.	H. A. Rayner, Esq.	
H. Grissell, Esq.	G. Ross, Esq., M.D.	
H. L. Hammack, Esq.	C. W. Siemens, Esq., D.C.L., F.R.S.	
W. Hardwick, Esq., M.D.	T. Roger Smith, Esq.	
T. E. Harrison, Esq.	G. R. Stephenson, Esq., F.R.S.	
T. Hawksley, Esq.	R. J. Stuckey, Esq.	
H. Howard, Esq.	C. B. Vignoles, Esq., F.R.S.	
S. M. Hubert, Esq.	F. W. Webb, Esq.	
Horace Jones, Esq., V.P.R.I.B.A.	E. Woods, Esq.	
H.H. Keeling, Esq.	Colonel Wray, R.E.	
J. Kelk, Esq.	T. H. Wyatt, Esq., M.R.I.B.A.	

The first meeting of the committee for civil engineering was held on Sub-committes. the 18th November 1873, when the following sub-committees were formed:—

- a.* Civil and mechanical engineering.
- b.* Architectural and building contrivances and materials.
- c.* Sanitary apparatus and construction.

As the general committee never held another meeting, and as the work of each of the three sub-committees was carried on to the end distinct from that of the others, it will be more convenient to treat these three sections in the first place as separate classes, and to give a summary of the whole class at the end of this report.

The sub-committee for civil and mechanical engineering held their first meeting on 29th November 1873, when Sir Jno. Coode was elected permanent chairman. Their last meeting was on 31st March 1874, they having held in all six meetings. The chief points of interest in their section were the various apparatus for diving, and the revolving light for the South Stack lighthouse. The committee were very desirous that this light should have been shown in motion and illuminated, but the expense of arranging for this would have been more than Her Majesty's Commissioners or the exhibitors could have undertaken. Through

Civil Engineer-  
ing, 1874. the recommendations given to the executive officers by the sub-committee various interesting exhibits were obtained, among which may be mentioned the models lent by the Lords of the Admiralty and by the Trinity Board.

The sub-committee for building contrivances and materials, at their first meeting on 1st December 1873, took into consideration the question of experiments on the materials exhibited. A scheme was prepared by Mr. Kirkaldy, was approved by the committee, and recommended for adoption to the Board of Management. Unexpected difficulties, however, arose, and after considerable correspondence with societies who, it was thought, might be interested in the proposed experiments, the sub-committee finally abandoned the scheme at their eighth meeting, on the 11th March 1874. Meanwhile, through the personal exertions of some members, and the advice given by those who could not personally co-operate, a large collection of building materials was obtained, some of which have since been transferred to the R.E. Institute at Chatham, and some to the South Kensington Museum. Circulars were sent, on the recommendation of the committee, to Commanding Royal Engineers throughout the country, asking their assistance, and many valuable additions to the collection were due to the aid thus obtained. The Convict Prisons Department contributed a series of models which added much to the interest of this section.

Colonel Gallwey, R.E., was chairman of this committee, which held in all 12 meetings, and whose labours were not completed until 14th May 1874.

The chairman of the sub-committee for sanitary apparatus and construction was Dr. Hardwick. At the time of the first meeting of this sub committee (2nd December 1873) it happened that an exhibition of sanitary apparatus had been held at Norwich, the list of exhibitors at which formed a guide as to the persons most likely to be willing to exhibit in London. Circulars were sent to all of these, as also to many others interested in sanitary matters, whose names were furnished by the various members of the sub-committee.

An application from the Native Guano Company to show in action their method of treating sewage raised, at the second meeting of the sub-committee on 16th December 1873, the whole question of the purification and utilisation of sewage. It was thought so desirable that various methods of treating sewage should be shown, and that all exhibitors of such methods should be compelled to go to the same source of supply, that the sub-committee directed inquiries to be at once made as to the best method of obtaining such sewage as might be required. After due inquiries had been made it appeared that if the various processes were shown in action all day, the expense of procuring sewage would be so great as to preclude the idea that any exhibitors would

consent to pay it. It was, therefore, arranged that the processes for the treatment of sewage should be shown in operation from 2 to 5 daily. The sewage was supplied by Messrs. Mowlem and Burt, in air-tight tanks containing 300 gallons, and was pumped from these tanks into the cisterns of the various exhibitors.

These processes were all shown in the western annexe. In the south galleries (Room XXIII. and south corridor) were shown all the rest of the exhibits in this section, many of which were well worthy of notice.

The number of exhibitors in the class of civil engineering is shewn below:—

		Austria.	Belgium.	China.	France.	Hanover.	Holland.	Japan.	Prussia.	Russia.	St. Vincent.	Sweden.	Switzerland.	Trinidad.	Wurtemberg.	United King-dom.	Total.
Sec. a.	Civil and mechanical engineering	-	2	-	-	4	-	2	-	1	1	-	3	1	-	32	46
„ b.	Building apparatus, &c.	2	2	1	4	1	-	1	2	2	1	6	-	1	1	107	131
„ c.	Sanitary apparatus, &c.	1	1	-	1	-	1	-	-	1	-	-	-	-	-	60	65
		5	3	1	9	1	3	1	3	4	1	9	1	1	1	199	242

E. G. CLAYTON, Capt. R.E.

## APPENDIX XXXVIII.

### HEATING. Class X., 1874.

Heating, 1874.

#### COMMITTEE.

F. A. Abel, Esq., F.R.S.

Professor T. M. Goodeve, M.A.

W. H. Barlow, Esq.

Dr. Mann.

E. J. Bramwell, Esq.

Dr. D. S. Price.

E. Chadwick, Esq., C.B.

Robert Rawlinson, Esq., C.B.

Lt. Col. Du Cane, C.B., R.E.

Revd. A. Rigg.

Major Gen. F. Eardley-Wilmot,

Capt. R. Scott, R.N.

R.A., F.R.S.

Major Webber, R.E.

General Eliot.

Captain Douglas Galton, C.B.,

F.R.S.

The Committee for this class was appointed by the Society of Arts, which had announced prizes for the best stoves, both for cooking and

Heating, 1874. heating. The former class of stoves did not strictly come within the scope of the class, there having been an especial class for cooking in 1873, but the rules were so far relaxed as to allow of the exhibition of such cooking stoves as were sent in to compete for the prizes offered.

The stoves of all classes which were sent in for competition were received as early as December 1873, as many arrangements had to be made for testing them, and it was necessary that the Committee should be able to form an opinion of the amount of work before them. The circulars and rules regarding this class were therefore sent out as early as possible in 1873. The number of stoves sent in for the competition was large, but before the date fixed by H.M.'s Commissioners for the reception of goods arrived, the Society of Arts Committee had progressed so far as to be able to state (a) what stoves should be rejected, (b) what should be recommended for Exhibition only, and (c) what should be tested for prizes as well as exhibited. The work therefore remaining to be done after the regular reception of goods had commenced was light and the Committee, when acting solely as an Exhibition Committee, held only three meetings.

Their labours as regards the testing of the stoves which competed for prizes were continued until nearly the close of the Exhibition, but as the final decision of the Committee was to award no prize, no detailed report of their proceedings has been published.

RETURN OF EXHIBITORS IN CLASS 10.

	United King-dom.	Austria.	Russia.	Belgium.	France.	Wurtemburg.	United States.	Sweden.	Total.
	112	1	4	1	2	1	1	7	129

The class was arranged in Room XXVI., South-west Galleries, the arrangement being confided to Mr. Bacon.

E. G. CLAYTON, Capt. R.E.

## APPENDIX XXXIX.

## LEATHER, &amp;c. Class XI., 1874.

Leather, 1874.

The following noblemen and gentlemen assisted the Commissioners in this class as the Committee:—

The Duke of Beaufort, K.G.	H. M. Holmes, Esq.
The Viscount Combermere.	G. N. Hooper, Esq.
The Lord Carington.	M. T. Husband, Esq.
Sir Watkin Williams-Wynn, Bart., M.P.	S. T. Jones, Esq.
Major Sir W. Palliser, C.B.	W. Lennan, Esq.
Sir Samuel W. Baker.	W. T. Snell, Esq.
W. Bayliss, Esq.	J. McIntosh, Esq.
W. W. B. Beach, Esq., M.P.	A. McDougall, Esq.
S. Blackwell, Esq.	J. D. McDougall, Esq.
W. Christie, Esq.	A. R. McTaggart Milroy, Esq.
H. R. Corbet, Esq.	E. S. Norris, Esq.
C. Cuff, Esq.	F. Oldaker, Esq.
W. W. Daviss, Esq.	J. Peters, Esq.
W. Essex, Esq.	J. Rankin, Esq.
Capt. Fenn.	W. Rickatson, Esq.
H. H. Flemming, Esq.	R. Russell, Esq.
A. Fulton, Esq.	W. Southey, Esq.
E. T. Holden, Esq.	J. I. Sowter, Esq.
J. Holland, Esq.	R. Stapleton, Esq.
	Capt. Wallace.

## RETURN OF EXHIBITORS.

		Austria.	Bavaria.	Belgium.	Denmark.	France.	Holland.	Japan.	Russia.	Sweden.	United Kingdom.	United States.	Total.
Sec. a.	Leather	22	1	7	1	3	1	1	21	2	43	1	103
Sec. b.	Saddlery, harness, &c.	3	—	2	1	1	1	—	4	2	47	—	61
		25	1	9	2	4	2	1	25	4	91	1	164

The committee held their first meeting on 27th June 1873, and, in accordance with their recommendation, advertisements were inserted in various papers devoted to the leather trade calling attention to this class of the Exhibition of 1874. In reply to these advertisements numerous applications were received, which were laid before the committee at their second meeting, on the 20th November 1873. At this

Leather, 1874. meeting the committee recommended the exhibition of certain special articles from foreign countries, for which applications were at once made to the various commissions. It was owing in great part to these applications that there was so large a foreign element in this class. It will be observed from the above table that in Sec. *a*. the foreign exhibitors numbered 60 as against 43 British exhibitors ; and although in Sec. *b*. there were only 14 foreign exhibitors while there were 47 from the United Kingdom, yet the space occupied by these 14 exhibitors was nearly as large as that allotted to the British trade. At their two following meetings, on the 20th Dec. 1873 and 15th January 1874, the committee turned their attention more especially to obtaining collections of ancient or otherwise remarkable saddlery and harness, and their recommendations resulted in the interesting contribution of Morocco saddlery by H.M. the Queen ; the horse furniture of the Duke of Monmouth by the Duke of Buccleuch ; the military harness and saddlery by the War Department ; the collection of African saddlery by Mr. Simmonds ; of South American saddlery by Mr. Bland ; and the State harness of the Marquis of Bute by Messrs. Whippy, Steggall, & Co. The committee held in all nine meetings, the last four of which were chiefly occupied in considering the applications that had been received and in making arrangements for rendering the representation of the class more complete. This class was originally intended to be confined to Rooms XI. and XII. on the ground floor of the east galleries, but the large influx of foreign exhibitors rendered an extension necessary, and finally the whole of the upper floor of the east quadrant was filled by exhibits in this class. With very few exceptions the whole of the objects were arranged by the officers of the Exhibition to the satisfaction of 164 exhibitors, whilst only one complained of the method of arrangement.

E. G. CLAYTON, Capt. R.E.

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#### APPENDIX XL.

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Bookbinding,  
Ancient and  
Modern, 1874.

#### BOOKBINDING (ANCIENT AND MODERN). Class XII., 1874.

Following the practice of the year, this class included specimens of both ancient and modern workmanship.

The formation of the collections were dealt with under the advice of a committee of the following gentlemen :—

The Duke of Devonshire, K.G.	
The Lord Houghton, D.C.L.,	
F.R.S.	
The Lord Acton.	

	The Right Hon. Sir D. Dundas,
	Q.C.
	Sir William Stirling Maxwell,
	Bart., M.P.

The Vice-Chancellor of Oxford.  
 The Very Rev. the Dean of  
 Durham.  
 W. T. Bone, Esq.  
 T. Gibson Craig, Esq.  
 Henry Cunliffe, Esq.  
 Augustus W. Franks, Esq.,  
 M.A., F.S.A.  
 Lieutenant-Colonel Hibbert.

For the selection of specimens of ancient bookbinding, the following gentlemen, forming the committee for the general representation of ancient objects, gave their assistance:—

Sir William Drake.  
 Sir M. Digby Wyatt.  
 Dr. Hugh Diamond.  
 Henry Durlacher, Esq.  
 T. Dyer Edwardes, Esq.  
 J. Evans, Esq.

J. Winter Jones, Esq., F.S.A.  
 J. W. Maskell, Esq.  
 F. H. Rivington, Esq.  
 A. Suttaby, Esq.  
 Charles Tennant, Esq.  
 J. Toovey, Esq.  
 R. S. Turner, Esq.  
 W. Watson, Esq.

Bookbinding,  
 Ancient and  
 Modern, 1874.

A. W. Franks, Esq.  
 F. W. Moody, Esq.  
 R. H. Soden Smith, Esq.  
 R. A. Thompson, Esq.  
 H. Vaughan, Esq.  
 T. M. Whitehead, Esq.

The class of bookbinding was defined as comprising binding in cloth, vellum, leather, velvet, wood, papier-mâché, or metal, ivory, and all material; also albums, scrap-books, portfolios, music-books, manuscript-books, memorandum-books, ledgers, and account-books.

The committee held several preliminary meetings and well-known bookbinders in different materials were invited to represent their branches of the trade, and the following were the number of exhibitors who responded by contributing specimens of *modern* work.

Great Britain	-	-	-	-	35
Austria	-	-	-	-	11
Russia	-	-	-	-	1
Sweden	-	-	-	-	1

Modern French bindings were represented in the French annexe. Messrs. Hopkinson and Cope exhibited bookbinding machinery in the machinery gallery, and Messrs. Zaehnsdorf showed the process of extra binding (by hand) in Room XIII., East Gallery.

Of specimens of ancient bookbindings, there were 29 contributors of *Ancient* bookbindings, all varieties, French, Italian, English, and Persian. The dean and chapter of Durham lent 17 examples, the Earl Spencer lent 31, and Mr. Turner contributed a perfect collection of 37, both ancient and modern.

Taken as a whole the general subject of bookbinding was fairly represented, and an opportunity was afforded for the study of the history of the art both of the past and of present days. All the specimens were exhibited in Room XIII., East Gallery.

(Signed) H. H. COLE, Lt. R.E.

## APPENDIX XLI.

Foreign Wines,  
1874.

## FOREIGN WINES. Class XIII., 1874.

Owing to the difficulties which presented themselves in 1873, when the sub-committee for wine, &c. wished to promote arrangements for enabling the public to taste what was exhibited in the "Food" Class, Her Majesty's Commissioners, in organising the arrangements for the Exhibition of 1874, determined that foreign wines should be again represented, and that the refreshment contract should present no hindrance to tasting of samples.

Accordingly they requested the following noblemen and gentlemen to act as a committee for making an exhibition of the pure wines of all countries:—

Earl of Dunmore.  
Viscount Powerscourt.  
Lord Skelmersdale.  
Sir Daniel Cooper, Bart.  
Colonel Charles Baring.  
Mr. E. L. Beckwith.  
Mr. Gordon Clark.  
Mr. John Corbett.  
Mr. F. W. Cosens.  
Mr. R. Gray.

Mr. C. H. Kayser.  
Mr. C. Lombard de Luc.  
Mr. H. Matthiessen.  
Mr. G. Moffatt.  
Mr. Joseph Prestwich, F.R.S.,  
F.S.A.  
Mr. E. Apps Smith.  
Mr. H. G. Smith.  
Mr. Morgan Yeatman.

It was determined that the exhibition should take place in the brick vaults of the Royal Albert Hall, which were rendered suitable for the purpose, and well lighted.

The Corporation of the Royal Albert Hall granted the free use of the vaults for the wine exhibition, but the exhibitors had to fit up, at their own cost, the spaces allotted to them.

Growers, shippers, and importers only were eligible to be exhibitors, the place of growth was requested to be given in all cases, and the name of the grower, if possible.

The object of the exhibition of wines was not to show bottles, which had been the case in former Exhibitions, but to enable the public to judge of different kinds of foreign wines by tasting them.

Space was allotted to those exhibitors who, at their own expense, provided attendants, and undertook that they should be present at their space in the cellar during the hours that the public were admitted.

Permission was given to each exhibitor, or group of exhibitors, to sell or give away glasses of wine, or samples in bottles (not larger than an ordinary bottle), and to put his own price on them.

The rules were translated into foreign languages and sent through Foreign Wines, 1874. the Foreign Office to the various wine-growing countries. The committee recommended that the wines should, as far as practicable, be exhibited geographically, and this course was adopted for wines from France, Spain, Portugal, Austria, Hungary, Italy, Greece, and the Colonies: Miscellaneous exhibitors of all kinds of wines had to be accommodated in one cellar. The most complete exhibitions were those made by the Portuguese and Spanish Governments. The former, which sent its wines in good time, occupied the whole of one of the large cellars, and many thousand specimens were there displayed. The Spanish wines arrived some time after the opening of the Exhibition, and had therefore to be shown in such spaces as could be found available. France did not make a strong show. The wines shown from Spain, Portugal, and France were not entered in the official catalogue, as the information was received too late; but the number of exhibitors were as follows:—

No. of Exhibitors.					
Portuguese	-	-	-	-	1,100
Spanish	-	-	-	-	420
Austro-Hungarian	-	-	-	-	68
French	-	-	-	-	53
Italian societies of wine-growers	-	-	-	-	4 (societies).
Australian	-	-	-	-	3
Russian	-	-	-	-	Not stated.
Victorian	-	-	-	-	Not stated.
Californian	-	-	-	-	1
Servian	-	-	-	-	Not stated.
Greek wines	-	-	-	-	1
Exhibitors of collections of all classes of wine	-	-	-	-	25

When the cellars were first opened to the public an entrance fee of sixpence per visitor was charged; but subsequently, at the request of the exhibitors, this charge was withdrawn, and the public were admitted free.

The great feature of this Exhibition lay in the display of wines, which had hitherto been unknown in England, and the public will probably reap considerable benefit from it, by becoming acquainted with wholesome, sound, and cheap wines.

The Society of Arts appointed committees to examine and taste the wines of Spain, Portugal, and those not well known in England, such as Australian, Servian, and other new wines, and when the reports are published much valuable information will be available.

(Signed) H. H. COLE, Lieut. R.E.

## APPENDIX XLII.

Scientific  
Inventions,  
1874.RECENT SCIENTIFIC INVENTIONS AND NEW DISCOVERIES.  
Division III., 1874.

## COMMITTEE.

Sir W. Fairbairn, Bart., LL.D., F.R.S.	Lieut.-Col. E. F. Du Cane, C.B., R.E.
Sir Eustace F. Piers, Bart.	Professor E. Frankland, D.C.L., F.R.S.
Major-Gen. Sir H. Harness, K.C.B.	Professor T. M. Goodeve, M.A.
Sir C. Wheatstone, D.C.L., F.R.S.	J. Hick, Esq., M.P.
F. A. Abel, Esq., F.R.S.	J. Norman Lockyer, Esq., F.R.S.
J. Anderson, Esq., LL.D., F.R.S.E.	J. Penn, Esq., F.R.S.
C. F. Beyer, Esq.	Dr. D. S. Price.
Major Frank Bolton.	J. Ramsbottom, Esq.
F. J. Bramwell, Esq.	C. W. Siemens, Esq., D.C.L., F.R.S.
Capt. Hans Busk, LL.D., F.R.G.S.	T. Sopwith, Esq., M.A., F.R.S.
Capt. Colomb, R.N.	Lieut.-Col. Strange, F.R.S.
Major W. Crossman, R.E.	Professor J. Tyndall, LL.D., F.R.S.
Major J. F. D. Donnelly, R.E.	C. B. Vignoles, Esq., F.R.S.

## RETURN OF EXHIBITORS.

Austria.	Bavaria.	Belgium.	France.	Holland.	Hungary.	Prussia.	Russia.	United States.	Wurtem- burg.	United Kingdom.	Total.
4	1	5	14	1	1	2	3	1	2	49	83

The number of Exhibitors in this division of the Exhibition of 1874 was less than in any previous exhibition of the series. This was due almost entirely to the fact that many objects which, in any other year would have been exhibited in this division, were included in the class of Civil Engineering, among which may be specified the diving apparatus of Messrs. Siebe & Gorman. The Committee held, in all, six meetings, the first two of which were occupied in making recommendations to Her Majesty's Commissioners concerning such recent inventions as it appeared specially desirable to exhibit; the two following in deciding on the acceptance or rejection of those inventions of which full details had been furnished, and the two last in examining the objects actually sent in for exhibition. The recommendations made by the Committee resulted in the exhibition of an interesting process of mould making and casting under pressure, by Mr. Jas. Mackintire, of Boston, U.S.A., and of various new inventions in relation to clocks and watches, which were obtained through the assistance of Mr. Johnson, of Clerkenwell.

In this division were shown models of various improved cattle trucks by eight exhibitors. The exhibition of these was due to the Society for Prevention of Cruelty to Animals. During the winter of 1873-4 this society organised an exhibition of models of cattle trucks, for which space was afforded by Her Majesty's Commissioners in the South Galleries, and from this exhibition those models which gained prizes or appeared worthy of notice were transferred to the Division of Scientific Inventions and New Discoveries in 1874. The west half of Room XXIII., South Galleries, was allotted to this division, but various exhibits were shown in other parts of the building, such as Mackintire's process, already alluded to, gas machines, printing processes, &c., which were placed in the machinery galleries and in the Western Annexe.

Scientific  
Inventions,  
1874.

E. G. CLAYTON, Capt., R.E.

### APPENDIX XLIII.

#### MACHINERY DIVISION, 1874.

Machinery,  
1874.

The machinery in motion was exhibited in 1874, as usual, in the five rooms on the ground floor, west galleries, the necessary power being obtained from five engines placed in small engine houses built off the main galleries. These engines were kindly placed at the disposal of Her Majesty's Commissioners by the following eminent firms:—

Messrs. Barrows and Stewart	for room No. I.
„ Tangye, Bros., and Holman	„ „ „ II.
„ Robey and Co.	„ „ „ III.
„ Ransomes, Sims, and Head	„ „ „ IV.
„ Davey, Paxman and Co.	„ „ „ V.

The machinery was arranged as follows:—In room No. I, were machinery for lace, bookbinding and leather; in the remaining rooms machinery connected with the class of civil engineering. An account of the special machinery for lace and bookbinding will be found in the reports relating to those classes (Appendix, pp. 155, 163). No special committees were formed for machinery in 1874, but the executive officers put themselves into communication at an early date with those firms who, it was thought, would probably exhibit, and with such others as were recommended from time to time by the committees of the various classes. The applications, as received, were laid before the committees, and when approved the space was allotted. The exhibitors of machinery in class 11, leather, numbered 16, all of whom were from the United Kingdom. Nine of these exhibited sewing machines to be used for

Machinery,  
1874.

leather, it having been specially resolved by the Committee on the 20th November 1873, that such machines should be admitted. The remaining seven exhibitors contributed pumping machinery for tanneries, leather presses and rollers, lift cutting machines, scudding machines, &c.

In machinery for class 9, civil engineering, there were 34 exhibitors, of whom 33 were from the United Kingdom and one from Austria. An endeavour was made to arrange machines of the same nature together, but in some cases the requisitions of exhibitors for steam, &c. rendered it impossible to adhere to a rigid classification. In No. II. room were arranged pressure blowers, smiths' hearths, steam pumps, machinery for pulverizing ore, &c., and stone dressing machinery. In No. III. room, at the northern end, was machinery for brick and tile making, the central and southern portion of the room being occupied by wood-working machinery. The engine for this room was specially furnished with a fire-box for burning sawdust and other refuse from the wood-working machines. Room No. IV. was entirely occupied by wood-working machines, and here the process of making doors was shown throughout the year by the exhibitors. In room No. V., at the northern end, were a few machines for working wood, the remainder of the room being occupied by rock drills, cement mills, &c. In the western annexe were shown apparatus for concrete building, for treatment of sewage, &c.

E. G. CLAYTON, Capt. R.E.

## APPENDIX XLIV.

Ethnological  
Collection,  
1874.

## ETHNOLOGICAL COLLECTION, 1874.

The following acted as the Committee for this class:—

Dr. F. J. Mouat, Chairman.	J. F. Collingwood, Esq., F.G.S.
The Rt. Hon. Sir H. Bartle Frere, G.C.S.I., K.C.B.	J. Barnard Davis, Esq., M.D., F.R.S.
Sir Samuel W. Baker.	J. Evans, Esq., F.R.S.
Major-Gen. Sir Vincent Eyre, C.B., K.C.S.I.	F. Galton, Esq.
Major General Sir A. Purves Phayre, C.B., K.C.S.I.	Colonel Harley, C.B.
J. Beddoe, Esq., M.D., F.R.S.	Bryan Hodgson, Esq.
Major Frank Bolton.	Col. Lane Fox, F.S.A.
E. W. Brabrook, Esq.	Dr. D. W. Leitner.
Professor G. Busk.	Major R. A. Leveson.
Hyde Clarke, Esq., LL.D.	C. R. Markham, Esq., C.B., F.R.S.
Major Donnelly, Hon. Sec. ; G. S. Saunders, Acting Sec.	W. Spottiswoode, Esq., V.P.R.S.
	E. Thomas, Esq., F.R.S.
	W. S. W. Vaux, Esq., M.A., F.R.S.

Ethnological  
Collection,  
1874.

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The Ethnological Collection of 1874 was intended to be merely the nucleus of a national museum of ethnology, which, it was hoped, would have been gradually collected in connexion with the International Exhibitions. The cessation of the Exhibitions, however, necessarily put an end to this scheme. The plan which the Committee proposed to carry out was to turn their special attention each year to one particular race, at the same time not refusing contributions illustrating the manners, &c. of other races. In 1874 it was proposed to make a collection from the Western Coast of Africa. The late date at which the Committee commenced its labours, however, prevented even a complete collection from Africa being made, and most of the objects shown were contributed by the London Missionary Society, and by private persons in England. Colonel Harley, C.B., put himself into communication with the various officials in Africa, but no collections were received in time to be exhibited. Besides the African collection there were exhibited various objects from Australia, New Zealand, Hudson's Bay, South Sea Islands, &c., and Dr. G. W. Leitner placed his collection at the disposal of the Committee. Every assistance in their power was given to the Committee by the Colonial Office, the Admiralty, the India Office, and by the London Missionary Society, and had the series of Exhibitions been continued the labours of the Committee would, doubtless, have been eventually crowned with success.

E. G. CLAYTON, Capt. R.E.

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## APPENDIX XLV.

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### BUILDINGS, REPAIRS, &c.

Buildings,  
Repairs, &c.

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*Royal Albert Hall.*—The Royal Albert Hall was treated as the crowning point of the Exhibitions, and used during the whole period. A covered entrance was constructed from the east side of the Hall to the east lower quadrant. Communications were expressly made from both of the quadrants, east and west. In 1872 it was found necessary to construct two additional entrances from the east and west crush rooms to the conservatory. In 1873 the roofs and skylights over the picture gallery were put in thorough repair. This year the new offices on the balcony floor were made by means of light wooden partitions. In 1874 the east lift room was plastered and distempered to serve as an office, and the vaults were whitewashed, and doors were fixed to the various cellars in order to prepare for the exhibition of foreign wines.

*East and West Quadrants and passage at the back of the Conservatory.*  
—In 1872 the floor of the lower quadrant, in possession of the Royal Horticultural Society, was fitted with hotwater pipes and covered with coloured tiles. The walls were decorated in distemper colour. In 1873

Buildings,  
Repairs, &c.

and 1874 the roofs of the quadrants were put into good repair and the walls distempered. In 1874 the offices on the west side were converted into quarters for the housekeeper of the Royal Albert Hall.

*East and West Galleries.*—These were constructed in 1870-71 and up to the close of the series of Exhibitions were for each year put in thorough repair.

Boiler houses and coal stores for the heating of the galleries were built on the east and west sides.

In 1872 arches were constructed in the east and west arcades ; the machinery gallery on the west was distempered all over, whilst the upper galleries on the east and west, the lower one on the east, together with staircases, were put in thorough repair by the filling up of holes made by hanging pictures, and by distempering damaged parts of the walls. Men were continually employed in keeping the roofs in repair and in stopping any leakage of rain through the putties. In 1873 the openings of the east arcade were framed and glazed to accommodate some of the carriages, cabs, &c. exhibited that year. The upper and lower galleries on the east and west received necessary repairs. In 1874 the pergolas on the terrace of the east and west galleries were repainted. The machinery gallery and engine sheds were completely distempered and painted, and the picture galleries and east lower gallery put in repair.

*South Galleries.*—These were constructed for the Exhibition of 1862 and formed part of the building of the Exhibition of that year. The central block is the property of H.M. Commissioners while the two wings are that of the Government. By an arrangement entered into between the Commission and the Science and Art Department the lower galleries were given up as space for the Exhibitions, and the upper storey of the central block was leased at a nominal rental to the Science and Art Department. In this way a passage was secured all round the Horticultural Gardens. In 1871 it was found necessary to construct a covered passage at the back of the central block, occupied by the refreshment rooms, and retiring rooms were built at the same time. For each of all the four Exhibitions the south galleries received necessary repairs, and in 1874 it was considered necessary to place glazed frames in the walls of the refreshment contractors' store rooms, in order that the police might give the alarm in the event of an outbreak of fire.

In 1871 Her Majesty's Commissioners had the right of passage in front of the board room of the Horticultural Society, but in 1872 this right did not exist, and in order to provide a circuit round the gardens a tunnel was constructed under the passage used in 1871. The floor of the tunnel was paved with mosaic made by convicts' labour and the walls were decorated by Mr. Gamble in distemper colours.

In 1872 a roadway leading from Exhibition Road was constructed to the back of the refreshment rooms.

*Detached Buildings and Annexes and Entrances.*Buildings,  
Repairs, &c.

The *French Annexe* was built at the cost of the French Commission in 1870-71, and was kept in repair by the French Commissioner excepting in 1873, when the space was occupied as part of the Exhibition proper, owing to the absence of the French Commission at Vienna.

The *East Machinery Annexe* was constructed in 1871, and the following year an engine and store house was added to it at the north end. The *Walter Press* was exhibited in motion in this annexe in 1872 which was prepared to receive it. In 1873 the shed was divided into two rooms and separated by a passage; the north room was fitted up as the School of Cookery Lecture Room, whilst the other was occupied by the Russian Commissioner. In 1874 both north and south rooms were converted into the National Training School of Cookery.

The *Belgian Annexe* on the east side was constructed at the cost of the Belgian Commission in 1872. The following year it became the property by purchase of Her Majesty's Commissioners, and since then has been kept in repair at their expense. In 1873 it was used as an Australian annexe, in 1874 half was appropriated for the special collection of the works of Owen Jones, the other half being used as a store for rejected exhibits. The building is now being converted into premises for the School of Art needlework.

The *Queensland Annexe* was erected in 1872 at the cost of the Queensland government, and has been kept in repair by the agent general up to the close of the Exhibitions.

The Swedish Commissioners in 1871 exhibited a *Swedish school-house of wood*, and it was erected on the west side. In 1872 it was purchased by Her Majesty's Commissioners and up to the close of the Exhibition has been used as a bier garten by the refreshment contractors. It was put in thorough repair in 1874.

The *south-west entrance* was constructed by Her Majesty's Commissioners in 1871; in subsequent years it was, however, only used as an exit. The two orchard entrances at the north-west, and north-east corners of the gardens which had previously existed, together with the south-west exit, were put in repair at the commencement of each year.

*Grounds, roads, &c.*—The open spaces on the east and west were laid out in roads and walks in 1871, two substantial timber roads for the traffic of heavy carts being provided on each side. Gardeners were employed each year to cut turf, gravel the paths, and attend to shrubs.

From 1871 to 1873 the charge of the works was with Capt. Grover, R.E., but upon his retirement they were handed over to me.

H. H. COLE, Lieut., R.E.

## APPENDIX XLVI.

Securities  
against Fire.

## ON THE SECURITY OF THE BUILDINGS FROM RISK BY FIRE.

At the close of the Exhibition each day a party of six men of the Royal Engineers made the round of the buildings, seeing that all fires and lights were extinguished, and that all fire-engines, buckets, &c., were in their places ready for use. This party slept in the buildings every night, and the police on duty had orders to give the alarm to them in case of any outbreak of fire. The police were also instructed by their inspector that it was part of their duty, both by night and day, to watch for any outbreak of fire, and they were further taught how to use the fire extincteurs which were placed at intervals throughout the buildings. During the day all the men of the Royal Engineer detachment on duty, numbering usually about 10, patrolled the buildings, and in addition to these men there were 25 attendants, part of whose duty it was to watch for any outbreak of fire, who were also instructed in the use of the fire extincteurs, and who were acquainted with the position of all the hydrants, fire buckets, &c. within their respective beats. No work requiring the use of fires was permitted to be done on the roof without the presence of a police constable or a sapper supplied with a fire extineteur and water buckets. A register of the pressure of water was taken by the senior non-commissioned officers of the R.E. detachment every two hours. Exhibitors of machinery were required to provide metal boxes in which to keep the oiled tow used in cleaning the machinery, and labourers were employed from time to time to clear away rubbish and shavings from beneath the floors. Smoking and the use of lucifer matches were forbidden except in certain portions of the building. A list of authorised fires was kept by the senior non-commissioned officers of Royal Engineers, and any fires not authorised which were found burning were extinguished. The fire-engines were lent for use by Messrs. Merryweather and Messrs. Shand and Mason, excepting in 1873, when they were provided by Messrs. Hayward, Tyler & Co. The fire extincteurs were Sinclair's with the exception of a few in the south galleries which were lent by Mr. Dennis.

E. G. CLAYTON, Capt. R.E.

## APPENDIX XLVII.

(See Appendix XI. p. 77.)

## RELATIONS WITH ROYAL HORTICULTURAL SOCIETY.

Relations with  
Horticultural  
Society.

In the year 1871 visitors to the Exhibition were admitted to the Gardens, with return to the Exhibition, at a rate fixed by the General Purposes Committee, except on occasions of flower shows, when the rate was fixed by the Royal Horticultural Society. Exhibition season ticket holders were admitted free at all times to the Gardens. The General Purposes Committee had the exclusive right to the use of the east and west arcades, and to the upper floor of the quadrants with a passage through the conservatory. All receipts for admission to the Gardens were placed to the credit of the Exhibition, the Royal Horticultural Society receiving 1d. in the 1s. on all receipts at the doors of the Exhibition. Fellows of the Royal Horticultural Society had the right of purchasing season tickets for the Exhibition at a reduction of one guinea on the charge to the public.

*Note.*—No. of visitors admitted to the Gardens during

Exhibition of 1871	- - - - -	214,266
Receipts on account of season tickets pur- chased by fellows of Royal Horticultural Society	- - - - -	£2,721 12 0
Receipts on account of admissions to Gardens	- - - - -	£2,601 12 8
		£5,323 4 8

<i>Deduct,</i> Head money paid to Royal Horti- cultural Society	- - - - -	£5,030 0 11
Balance	-	£293 3 9

In 1872 visitors to the Exhibition were admitted to the Gardens, with return to the Exhibition, at a rate fixed by the Royal Horticultural Society. Exhibition season ticket holders were admitted free to the Gardens, but not to the flower shows. The General Purposes Committee had the exclusive right to the use of the east and west arcades, to both floors of the quadrants, and to passage through conservatory on both floors. All receipts for admission to the Gardens were credited to the Royal Horticultural Society, who also received 1d. in the 1s. on all receipts for admission at the doors of the Exhibition. The Society agreed to purchase Exhibition season tickets for all their fellows at the rate of 10s. 6d. each. The General Purposes Committee undertook to tile and redecorate the ground floors of the quadrant arcades.

**Relations with  
Horticultural  
Society.**

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Towards the end of the season visitors to the Exhibition were admitted free to the Gardens, the General Purposes Committee undertaking to pay to the Royal Horticultural Society their average receipts.

*Note.*—No. of Visitors admitted to the Gardens during

Exhibition of 1872 - - - - - 230,941

The receipts on account of season tickets and the payments on account of head money balanced each other. The following were the additional payments made by the General Purposes Committee for the use of the Gardens :—

Tiling and decorating quadrant arcades	-	£5,407	16	3
Average receipts paid to Royal Horticultural Society during months that Gardens were thrown open	-	£365	5	10
				<hr/>
				£5,773 2 1

In 1873 visitors to the Exhibition were admitted to the Gardens, without return to the Exhibition, at a rate fixed by the Royal Horticultural Society. Exhibition season ticket holders had no privileges in connexion with the Gardens. The Board of Management had exclusive right to the use of the upper floor of the quadrant arcades, and shared the use of the east and west arcades with the Royal Horticultural Society. They also had a right of way across the lower part of the gardens. For these privileges the Board agreed to pay 1,000*l.* to the Royal Horticultural Society.

In 1874 the arrangements were the same as in 1873, except that no right of way across the lower part of the gardens was secured for the Exhibition. In some minor matters of detail also the arrangements were slightly altered. For the privileges granted this year by the Royal Horticultural Society the Board of Management agreed to pay the sum of 750*l.*

(*Note.*—No returns of numbers admitted to the Gardens were kept by the executive of the Exhibition in 1873 and 1874.)

1st February 1875.

E. G. CLAYTON, Capt. R.E.

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APPENDIX XLVIII.

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**Railway  
Arrangements.**

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RAILWAY ARRANGEMENTS.

The nearest station to the Exhibition Buildings was that of South Kensington, and arrangements were made early in 1871 for the establishment by the Metropolitan and the Metropolitan District Companies of an omnibus service between that station and the main entrance of the Exhibition at the Royal Albert Hall. The omnibuses also called at the

south-east entrance in Exhibition Road. The two companies issued through tickets, including the omnibus fare and the charge for entrance to the Exhibition, and this system proved convenient to the public. The omnibus service was discontinued after 1872, but through tickets were still issued in 1873, and (by special arrangement) for a short time during 1874. Most of the railway companies having termini in London also issued through tickets, including admission, being allowed in 1871, and the first few weeks of 1872, a minimum of 5 per cent. on the number of visitors exceeding 1,000 and less than 2,000, and 10 per cent. on any number over 2,000. From June 1872 a new arrangement was entered into with the principal companies by which a reduction of 25 per cent. was made on the railway fare from all stations within 20 miles from London, the same reduction being made on the charge for admission to the Exhibition. This arrangement continued in force until the close of the Exhibition of 1874. In addition to these general arrangements with the railway companies, tickets were issued, at a reduction, to large firms, who then made their own agreements with the companies for special excursions to the Exhibition.

E. G. CLAYTON, Capt. R.E.

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## APPENDIX XLIX.

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### REFRESHMENTS.

Refreshments.

The contract for refreshments was given to Messrs. Spiers and Pond throughout the four Exhibitions of 1871 to 1874. In 1871 hot and cold luncheons were furnished in the two large refreshment rooms in the south galleries, in the vestibule between which ices, American drinks, and light refreshments generally were provided. To the rear of the vestibule was a large second class luncheon bar. Light refreshments, including tea and coffee, were also provided in the French annexe, in the western arcade, and at several bars in the Royal Albert Hall. In 1872 the second class refreshment room was not made use of, but two new bars were opened in the east and west, the former in the Queensland annexe, the latter in the Swedish school house, which had been purchased by H.M.'s Commissioners. In 1873 and 1874 but slight alterations were made, excepting that hot luncheons were discontinued, and in the last-named year the vestibule between the two refreshment rooms was made use of for luncheons as well as for lighter refreshments, the large rooms being closed. The contract for 1871 was for the year only, Messrs. Spiers and Pond paying to H.M.'s Commissioners one-third of a penny on all visitors. At the close of 1871 a new contract was entered into, which was for two years, the contractors paying to H.M.'s

Refreshments. Commissioners  $\frac{3}{4}d.$  per visitor during 1872, and 1d. per visitor during 1873. In 1874 no head money was paid by Messrs. Spiers and Pond. The total amount received was 5,856l. 0s. 8d.

E. G. CLAYTON, Capt. R.E.

## APPENDIX L.

Police.

## POLICE.

The watching, both by day and night, throughout the series of the Exhibitions has been performed by the Metropolitan Police, as in preceding Exhibitions, who not only looked after the public, but were employed in the galleries to guard against danger from fire through improper use of matches, &c. by workmen engaged on the buildings.

1871.—On 1st February, the date on which goods began to be received, a police force of one serjeant and 10 constables was provided by the Commissioner of Police. This number was gradually increased as the work proceeded.

On 1st July the force employed consisted of two inspectors, four serjeants, and 53 constables, at which the force remained until the closing of the Exhibition on 30th September, when it was gradually reduced; but on certain special days the force was increased: thus on 1st May, the opening day, the total force of police in the buildings amounted to 12 inspectors, 29 serjeants, 223 constables.

In 1872 the numbers employed were nearly the same as in the preceding year; but in 1873 and 1874 it was found practicable to reduce the number of police constables.

On the 12th of October 1872 an unsuccessful attempt was made to rob a case of jewellery in No. IV. Room.

The following Return shows the Number of Permanent Police Inspectors, Serjeants, and Constables, on first day of each month from January 1871 to January 1875.

E. G. CLAYTON, Capt. R.E.

## APPENDIX LI.

## WAITING ROOMS and CLOAK ROOMS.

Waiting and  
Cloak Rooms

The number of waiting rooms furnished for the convenience of the public in the four Exhibitions was as follows:—

1871	-	5	Gentlemen's rooms and 5 Ladies' rooms.
1872	-	3	" "
1873	-	3	" "
1874	-	4	" "

In 1873 and in 1874 the Carbon Fertiliser Company provided, in addition to the above, a room for gentlemen in the eastern annexe, and for ladies at the south-west exit. The charge made at all the rooms was the same, namely, one penny. Umbrellas and parcels were taken charge of at these rooms at a charge of 2d. per article. In addition, there were in the four Exhibitions the following counters at which umbrellas and parcels might be left:—

1871	-	Royal Albert Hall and S.E. entrances.
1872	-	N.E., S.E., and N.W. entrances.
1873	-	S.E. and N.W. entrances.
1874	-	S.E. entrance.

It was not compulsory on visitors to leave their umbrellas and sticks at the entrances.

The receipts for waiting and cloak rooms in the four years are shown below:—

		£ s. d.
1871	-	970 14 10
1872	-	513 16 2
1873	-	332 15 2
1874	-	237 9 3
	Total	<u>£2,054 15 5</u>

No separate heading of account having been kept of the expenditure on waiting rooms, all that can be given is the amount of wages paid each year to the attendants in the various rooms:—

		£ s. d.
1871	-	233 4 0
1872	-	215 0 0
1873	-	249 8 0
1874	-	264 0 0
	Total	<u>£961 12 0</u>

E. G. CLAYTON, Capt. R.E.

9th February 1875.

## APPENDIX LII.

## Season Tickets.

## SEASON TICKETS in 1872.

The following was the announcement respecting the issue of Season Tickets in 1872 :—

The issue of SEASON TICKETS for 1872 will commence in Nov. 1871.

1. The charges for Season Tickets admitting to all the Galleries of the London International Exhibition, from 1st May 1872 to 30th September 1872, will be as follows :—

2. Associates of the Exhibition will pay an entrance fee of 1*l.* 1*s.* and 1*l.* 1*s.* annually for a Season Ticket. They will have the privilege of obtaining Season Tickets for the ladies of their families at 1*l.* 1*s.* each person. Forms for admission may be obtained from the Secretary.

3. Fellows or Members of Societies promoting Arts, Sciences, Industry, and Learning, will also have the privilege of obtaining for themselves and ladies of their families Season Tickets for the International Exhibitions on payment of 1*l.* 1*s.* each ticket.

4. The general public will pay 2*l.* 2*s.* a year for Season Tickets.

5. The following is a list of Learned Societies in the United Kingdom taken from the Second Report of Her Majesty's Commissioners published in 1853, with additions, the Members of which are eligible to obtain Season Tickets at 1*l.* 1*s.* each :—

Antiquaries, Society of.	Institution of Civil Engineers.
Apothecaries, Society of.	Institution of Mechanical Engineers.
Architects, Royal Institute of British.	Linnæan Society.
Archæological Association.	Literature, Royal Society of.
Archæological Institute.	London Institution.
Arundel Society.	Manchester Philosophical Society.
Art-Union of London.	Medical Society of London.
Asiatic Society, Royal.	Medical and Chirurgical Society, Royal.
Astronomical Society, Royal.	Medico-Botanical Society.
Botanical Society of London.	Meteorological Society of London.
British Association for the Advancement of Science.	Meteorological Society of Scotland.
British Institution.	Microscopical Society.
Cambridge Philosophical Society.	Numismatic Society.
Cavendish Society.	Ornithological Society.
Chemical Society.	Palæontographical Society.
College of Physicians.	Pathological Society.
College of Surgeons.	Pharmaceutical Society.
Entomological Society.	Royal Academy of Arts.
Ethnological Society.	Royal Academy of Music.
Geographical Society, Royal.	Royal Albert Hall, Members of.
Geological Society.	Royal Dublin Society.
Highland and Agricultural Society of Scot- land.	Royal Horticultural Society.
Harveian Society.	Royal Agricultural Society.
Hunterian Society.	Royal Institution.
	Royal Irish Academy.
	Royal Society of London.

Royal Society of Edinburgh.	Society of Painters in Water Colours.	Season Tickets.
Royal Scottish Academy of Painting and Sculpture.	Society of Painters in Water Colours (New).	—
Society of Arts.	Statistical Society.	
Society of Antiquaries, Scotland.	Sydenham Society.	
Society of British Artists.	Zoological Society.	

6. Members of Convocations, Senates, or Councils of the Universities of the United Kingdom, School Boards, and Chambers of Commerce, will have the same privilege.

7. Societies not named in the above List wishing to have the said privilege for their Members must address the Secretary of Her Majesty's Commissioners for the International Exhibitions.

8. Members of Societies, &c., desirous of having Season Tickets at the reduced price must send a printed list of Members of the Society with their names marked, or send a Certificate of the Society to which they belong, signed by the Secretary or other Officer of the Society.

9. "Natives of Foreign Countries will be received on a footing of equality with the inhabitants of our own land and of Her Majesty's Colonial Possessions." (See Second Report of H. M. Commissioners.)

10. The Season Tickets will give admission to the Galleries of the Exhibition around the Royal Horticultural Gardens, also to the portions of the Royal Albert Hall when free to the daily visitors to the Exhibition. Season Ticket holders will have the privilege of entering the Galleries two hours before the general public.

Season Tickets may be had at the Offices of the Exhibition in Kensington Road, and all the principal Agents.

Offices, Royal Albert Hall,  
12 July 1871.

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### APPENDIX LIII.

#### MUSICAL PERFORMANCES.

##### EXHIBITION OF 1871.

During the Exhibition of 1871 military bands performed daily in the Conservatory or Gardens of the Royal Horticultural Society, or in the Royal Albert Hall.

The following are the bands that played, arranged according to the number of performances that each gave —

			No. of performances.
Band of the Royal Horse Guards	-	-	38
„ Belgian Royal Guards	-	-	16
„ Coldstream Guards	-	-	13
„ Scots Fusilier Guards	-	-	12

Military bands.	Band of the French Republican Guards	No. of performances.	
		-	9
	Swedish Guards - - -	-	9
	Grenadier Guards - - -	-	9
	Honourable Artillery Company - - -	-	9
	Royal Engineers - - -	-	-
	Royal Artillery - - -	-	5
	1st Life Guards - - -	-	3
	2nd Life Guards - - -	-	3
	Total number of performances - - -	-	132

Concerts in the  
Royal Albert  
Hall.

A series of 13 day concerts were given in the Royal Albert Hall.

Organ per-  
formances.

Performances on the grand organ in the Royal Albert Hall were given by organists from France, Germany, Norway, and Sweden, as well as by various British organists. There were in all 84 recitals.

#### EXHIBITION OF 1872.

Military bands were engaged to play daily in the Conservatory, Gardens, or Royal Albert Hall. The following bands attended:—

Military bands.	Band of the Royal Horse Guards	No. of performances.	
		-	35
	Scots Fusilier Guards - - -	-	25
	2nd Life Guards - - -	-	15
	Honourable Artillery Company - - -	-	14
	Coldstream Guards - - -	-	13
	1st Life Guards - - -	-	12
	Royal Engineers - - -	-	7
	Royal Artillery - - -	-	6
	London Irish Volunteers - - -	-	6
	Grenadier Guards - - -	-	4
	Police - - -	-	4
	Royal Marines - - -	-	4
	Total number of performances - - -	-	145

Concerts.

Musical instruments being a class of this year's Exhibition arrangements were made, under the direction of Herr Pauer, to give a series of eight recitals in the Royal Albert Hall, when some of the instruments were tried.

There were in addition to these recitals seven day concerts in the Hall.

#### EXHIBITION OF 1873.

Concerts.

This year it was determined to discontinue the military bands, and in their place arrangements were made for daily instrumental concerts

under the direction of Mr. Barnby. 172 such concerts were given in the Royal Albert Hall.

A series of 171 organ performances were given, the players being <sup>Organ performances.</sup> Mr. Best and Dr. Stainer.

#### EXHIBITION OF 1874.

Military bands were engaged to play on the afternoons of Thursday and Saturday in the ante-garden of the French Annexe. The following bands attended :—

				No. of performances.
Band of the Royal Artillery	-	-	-	23
„ Royal Horse Guards	-	-	-	22
„ Scots Fusilier Guards	-	-	-	3
„ Carabineers	-	-	-	2
Hungarian Minstrels	-	-	-	1
Total number of performances	-	-	-	<hr/> 51

During the period of the Exhibition six day concerts were given in the <sup>Concerts.</sup> Royal Albert Hall.

Mr. Carter was engaged to give a daily afternoon recital on the organ <sup>Organ performances.</sup> in the Albert Hall.

H. H. COLE, Lieut. R.E.

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#### APPENDIX LIV.

PROPORTION which was suggested as PAYABLE by each COLONY towards the CONSTRUCTION and ANNUAL MAINTENANCE of a PERMANENT COLONIAL COURT in connection with the ANNUAL INTERNATIONAL EXHIBITIONS in LONDON, taking Revenue as the Measure of the Power of the several Colonies to contribute towards the necessary Funds for its construction and maintenance. (This was communicated to the various colonies by the Colonial Office, and the results are noted in the Column of Remarks.)

COLONY.	Revenue, 1871.	Contribution. 2s. 8½d. Per Cent.	Subscription. 1½d. Per Cent.	REMARKS.
Canada (Dominion)*	£ 4,028,200	£ 5,454 17 1	£ 285 6 7	No result.
Victoria - -	3,305,300	4,475 18 6	234 2 6	Occupied space in the Belgian annexe in 1873.
New South Wales, 1870.	2,490,200	3,372 2 8	176 7 9	Occupied space in the Belgian annexe in 1873.
New Zealand - -	1,342,100	1,817 8 6	95 1 3	No result.
Ceylon - -	1,121,700	1,518 19 4	79 9 0	No result.

\* Ontario, Quebec, Nova Scotia, New Brunswick, British Columbia, Manitoba.

COLONY.	Revenue, 1871.	Contribution. 2s. 8½d. Per Cent.	Subscription. 1½d. Per Cent.	REMARKS.
Queensland -	£ 800,000	£ 1,083 6 8	£ 56 13 4	Built a separate annexe in 1872, and occupied it to 1874.
South Australia -	778,100	1,053 13 6	55 2 3	Occupied space in the Belgian annexe in 1873.
Cape -	744,800	1,008 11 8	52 15 1	Favourable to the scheme, but no result.
Mauritius -	617,000	835 10 5	43 14 1	Voted 405 <i>l.</i> contribution and 21 <i>l.</i> subscription; wished to be rated the same as the Straits Settlements.
Jamaica -	434,400	588 5 0	30 15 4	No result.
British Guiana -	379,600	514 0 10	26 17 9	No result.
Straits Settlements -	298,700	404 0 9	21 3 1	Voted 405 <i>l.</i> contribution and 21 <i>l.</i> subscription.
Tasmania -	269,700	365 4 4	19 2 0	Voted 365 <i>l.</i> contribution and 19 <i>l.</i> subscription.
Trinidad -	264,400	358 0 10	18 14 6	Voted 358 <i>l.</i> contribution and 18 <i>l.</i> subscription.
Windward Isles* -	209,200	283 5 8	14 16 3	Voted 283 <i>l.</i> contribution and 14 <i>l.</i> subscription.
Natal -	176,500	239 0 2	12 10 0	No result.
Hong Kong -	176,000	238 6 8	12 9 4	No result.
Malta -	170,900	231 8 6	12 2 1	Voted 231 <i>l.</i> contribution and 12 <i>l.</i> subscription.
West African Settlements.†	167,700	227 1 10	11 17 5	No result.
Newfoundland -	164,300	222 9 9	11 12 9	Voted 223 <i>l.</i> contribution and 12 <i>l.</i> subscription.
Prince Edward's Isle‡	118,700	160 14 10	8 8 1	No result.
Leeward Isles§	109,900	148 16 5	7 15 5	No result.
Western Australia -	97,600	132 3 4	6 18 3	No result.
Honduras -	42,900	58 1 10	3 0 9	Favourable to the scheme, but no result.
Bahamas -	41,900	56 14 10	2 19 4	No result.
St. Helena -	39,100	52 18 9	2 15 2	No result.
Turk's Island -				
Labuan -				
Heligoland -				
Falkland Isles -				
Gibraltar -	38,200	51 14 7	2 14 1	No result.
Bermuda -	35,000	47 7 11	2 9 7	No result.
	18,462,100	25,000 14 2	1,307 13 0	

\* Barbadoes, St. Vincent, Grenada, Tobago, St. Lucia.

† Sierra Leone, Gambia, Lagos, Gold Coast.

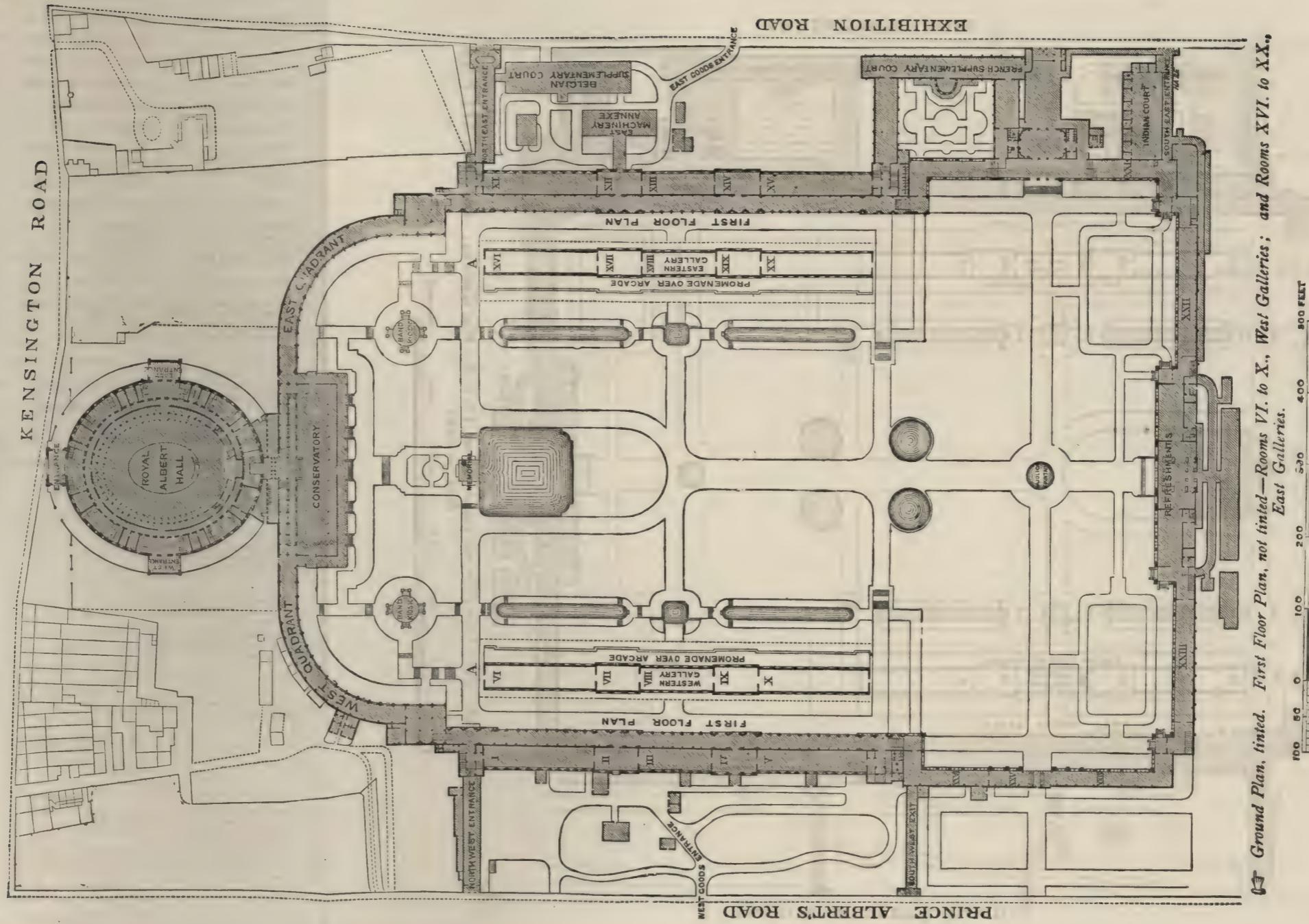
‡ Now part of the Dominion of Canada.

§ Antigua, St. Kitts, Dominica, Nevis,Montserrat, Virgin Islands.

H. H. COLE, Lieut. R.E.



APPENDIX LV.



Ground Plan, tinted. First Floor Plan, not tinted—Rooms VI. to X., West Galleries; and Rooms XVI. to XX. East Galleries.

## DISTRIBUTION OF SPACE.

Year.	1871.	1872.	1873.	1874.
ROOMS IN THE EAST AND WEST GALLERIES.				
I.	Machinery	-	Cotton Machinery	Silk Machinery
II.	Machinery	-	Machinery for Printing	Machinery for Food
III.	Machinery	-	Machinery for Printing	Machinery for Food
IV.	Machinery	-	Machinery for Printing	Machinery for Food
V.	Machinery	-	Machinery for Printing	Machinery for Food
VI.	British Paintings	-	British Paintings	German, Italian, Dutch Paintings.
VII.	Miscellaneous Art	-	Miscellaneous Art	French, Italian, Dutch, and British Paintings.
VIII.	British Water Colours	-	British Water Colours	British Paintings.
IX.	Miscellaneous Art	-	Miscellaneous Art	Miscellaneous Art.
X.	British Paintings	-	British Paintings	Bavarian Paintings.
XI.	Pottery	-	Musical Instruments	Saddlery and Harness.
XII.	Pottery	-	Musical Instruments	Saddlery and Harness.
XIII.	Pottery	-	Jewellery	Bookbinding.
XIV.	Pottery	-	Jewellery	Lace.
XV.	Pottery	-	Jewellery	Lace.
XVI.	Belgian Fine Art	-	Russian and Belgian Fine Art.	Belgian Fine Art.
XVII.	Reproductions	-	Reproductions	German Paintings.
XVIII.	German, Italian, and Scandinavian Paintings.	-	German and Italian Paintings.	Dutch, Italian, Austrian, Danish Paintings.
XIX.	French Fine Art	-	French Fine Art	French Fine Art.
XX.	French Fine Art	-	French Fine Art	French Fine Art.

## SOUTH GALLERIES.

XXI.	British and Foreign Paintings.	Paper and Stationery	Carriages	Civil Engineering.
XXII.	Meyrick Collection of Armour.	Paper and Stationery	Carriages	Architecture, Building Appliances, and Construction.
XXIII.	Austrian Fine Art, &c.	Scientific Inventions	Cooking Apparatus	Scientific Inventions and Sanitary Apparatus.
XXIV.	Building Appliances, S. K. M.	Building Appliances, S. K. M.	Building Appliances, S. K. M.	Building Appliances, S. K. M.
XXV.	Fish Museum	Fish Museum	Fish Museum	Fish Museum.
XXVI.	Scientific Inventions	Printing Processes	Heavy Steel Goods	Heating Apparatus.

## ROYAL ALBERT HALL.

Picture Gallery	Paintings, Photographs, Architectural Designs, Engravings, &c.	-	Designs, Bayeux Tapestry, Photographs, Engravings, &c.	Ethnological Collections.
Crush Rooms	-	-	-	Photographs, Engravings, Architectural Designs, Offices.
East Theatre	Educational Works: Musical Instruments for Schools.	-	-	-
West Theatre	Educational Works	-	Surgical Instruments.	-
South Vestibule, Grand Tier, Balcony Floor	Woollen and Worsted Fabrics.	-	Steel and Cutlery	Offices.

## QUADRANTS.

Upper	Sculpture	Cotton	Food, Wine, Tobacco Processes.	Designs; Japanese Objects.
Lower	-	Architectural Designs, Engravings, Photographs, and Japanese Objects.	-	-

## ANNEXES.

Animal Shed	Wool-growing Animals	Removed.	Bier Garten	Bier Garten.
Swedish House	Swedish Educational Appliances.	Bier Garten	-	-
French Building	French Art and Industry	French Art and Industry	Carriages	French Art and Industry.
India Court	Indian Art and Industry	Indian Art and Industry	Indian Art and Industry	Indian Art and Industry
East Machinery Annexe.	Machinery for Pottery	"Times" Printing in the Walter Press.	School of Cookery.	School of Cookery.
Belgian Court	-	Belgian Art and Industry.	Russian Objects.	Owen Jones Collection.
Queensland Court	Produce from New South Wales.	Queensland Produce	Colonial Produce	Store.
New South Wales Court.	-	Unpacking Shed	Queensland Produce	Queensland Produce.
			Unpacking Shed	Unpacking Shed.

H. H. COLE, Lieut. R.E.

## APPENDIX LVI.

Numbers of RETURN showing the Number of Visitors on the same Days of each successive Week.  
Visitors Daily.

## MONDAYS.

Date.	Fee.	By Payment.	By Tickets.	Total.	Date.	Fee.	By Payment.	By Tickets.	Total.					
1871.														
May 1	Nil	—	19,145	19,145	May 26	1 0	2,765	165	2,930					
," 8	1 0	6,322	745	7,067	June 2	1 0	10,555	231	10,786					
," 15	1 0	7,878	528	8,406	," 9	1 0	2,793	159	2,952					
," 22	1 0	6,999	446	7,445	," 16	1 0	2,867	176	3,043					
," 29	1 0	21,462	484	21,946	," 23	1 0	2,320	283	2,603					
June 5	1 0	7,443	338	7,781	," 30	1 0	2,581	151	2,732					
," 12	1 0	7,073	284	7,357	July 7	1 0	2,495	158	2,653					
," 19	1 0	8,088	1,060	9,148	," 14	1 0	2,699	123	2,822					
," 26	1 0	8,350	370	8,720	," 21	1 0	1,982	120	2,102					
July 3	1 0	7,772	317	8,089	," 28	1 0	2,043	143	2,186					
," 10	1 0	9,586	392	9,978	Aug. 4	0 6	8,418	135	8,553					
," 17	1 0	11,549	378	11,927	," 11	0 6	2,484	100	2,584					
," 24	1 0	8,907	336	9,243	," 18	0 6	3,112	89	3,201					
," 31	1 0	9,402	304	9,706	," 25	0 6	3,520	96	3,616					
Aug. 7	1 0	14,749	360	15,109	Sept. 1	0 6	2,233	74	2,307					
," 14	1 0	6,206	170	6,376	," 8	0 6	3,609	95	3,704					
," 21	1 0	7,887	195	8,082	," 15	0 6	2,771	110	2,881					
," 28	1 0	6,772	207	6,979	," 22	0 6	3,095	95	3,190					
Sept. 4	1 0	7,453	230	7,683	," 29	0 6	2,918	87	3,005					
," 11	1 0	7,770	233	8,003	Oct. 6	0 6	2,361	118	2,479					
," 18	1 0	11,159	355	11,514	," 13	0 6	1,520	95	1,615					
," 25	1 0	12,678	443	13,121	," 20	0 6	1,459	108	1,567					
					," 27	0 6	2,296	141	2,437					
1872.														
April 29	Nil	—	2,090	2,090	1874.									
May 6	1 0	3,080	454	3,534	April 6	1 0	13,760	765	14,525					
," 13	1 0	2,603	378	2,981	," 13	1 0	1,552	167	1,719					
," 20	1 0	20,771	771	21,542	," 20	1 0	1,782	181	1,963					
," 27	1 0	4,209	477	4,686	," 27	1 0	1,456	178	1,634					
June 3	1 0	4,066	455	4,521	May 4	1 0	1,405	216	1,621					
," 10	1 0	3,947	398	4,345	," 11	1 0	1,452	198	1,650					
," 17	1 0	3,529	441	3,970	," 18	1 0	1,390	209	1,599					
," 24	1 0	3,268	303	3,571	," 25	1 0	8,839	1,278	10,117					
July 1	1 0	3,912	397	4,309	June 1	1 0	1,834	174	2,008					
," 8	1 0	4,378	1,307	5,685	," 8	1 0	1,499	189	1,688					
," 15	1 0	4,558	502	5,060	," 15	1 0	1,767	169	1,936					
," 22	1 0	3,556	282	3,838	," 22	1 0	3,443	158	3,601					
," 29	1 0	4,262	267	4,529	," 29	1 0	1,788	211	1,999					
Aug. 5	1 0	11,689	419	12,108	July 6	1 0	1,502	190	1,692					
," 12	1 0	5,048	322	5,370	," 13	1 0	1,151	156	1,307					
," 19	1 0	5,308	494	5,802	," 20	1 0	1,350	150	1,500					
," 26	1 0	5,074	211	5,285	," 27	1 0	1,308	149	1,457					
Sept. 2	1 0	5,884	276	6,160	Aug. 3	1 0	8,231	976	9,207					
," 9	1 0	4,784	234	5,018	," 10	1 0	1,197	140	1,337					
," 16	1 0	5,725	284	6,009	," 17	1 0	2,100	193	2,293					
," 23	1 0	5,335	374	5,709	," 24	1 0	1,095	162	1,257					
," 30	1 0	5,750	460	6,210	," 31	1 0	1,223	127	1,350					
Oct. 7	1 0	3,586	371	3,957	Sept. 7	0 3	3,486	146	3,632					
," 14	1 0	3,555	326	3,881	," 14	0 3	3,637	153	3,790					
					," 21	0 3	3,924	155	4,079					
1873.														
April 14	1 0	10,101	507	10,608	Oct. 5	0 3	2,470	135	2,605					
," 21	1 0	3,002	258	3,260	," 12	0 3	2,199	168	2,367					
," 28	1 0	3,039	284	3,323	," 19	0 1	5,145	148	5,293					
May 5	1 0	2,032	170	2,202	," 26	0 1	7,516	140	7,656					
," 12	1 0	2,900	240	3,140										
," 19	1 0	2,645	178	2,823										
							Grand total		564,671					

## RETURN showing the Number of Visitors, &amp;c.—continued.

Numbers of  
Visitors Daily.

## TUESDAYS.

Date.	Fee.	By Payment.	By Tickets.	Total.	Date.	Fee.	By Payment.	By Tickets.	Total.
1871.					1873.				
May 2	10 0	487	1,587	2,074	May 27	1 0	3,603	177	3,780
9	1 0	7,404	679	8,083	June 3	1 0	5,045	143	5,188
16	1 0	9,094	673	9,767	10	1 0	3,147	162	3,309
23	1 0	9,655	515	10,170	17	1 0	3,124	215	3,339
30	1 0	14,134	471	14,605	24	1 0	3,101	137	3,238
June 6	1 0	8,387	330	8,717	July 1	1 0	2,616	127	2,743
13	1 0	8,558	404	8,962	8	1 0	2,824	162	2,986
20	1 0	10,304	469	10,773	15	1 0	2,448	129	2,577
27	1 0	9,371	412	9,783	22	1 0	2,697	141	2,838
July 4	1 0	8,764	358	9,122	29	1 0	2,330	156	2,486
11	1 0	7,792	335	8,127	Aug. 5	1 0	1,970	89	2,059
18	1 0	10,720	407	11,127	12	1 0	1,992	93	2,085
25	1 0	10,245	363	10,608	19	1 0	2,571	110	2,681
Aug. 1	1 0	13,403	383	13,786	26	1 0	2,016	100	2,116
8	1 0	7,492	307	7,799	Sept. 2	1 0	1,960	124	2,084
15	1 0	7,418	226	7,644	9	1 0	2,219	110	2,329
22	1 0	10,324	236	10,560	16	1 0	1,909	113	2,022
29	1 0	9,352	252	9,604	23	1 0	2,077	133	2,210
Sept. 5	1 0	9,352	414	9,766	30	1 0	1,680	118	1,798
12	1 0	10,020	382	10,402	Oct. 7	1 0	1,199	94	1,293
19	1 0	12,660	482	13,142	14	1 0	1,399	113	1,512
26	1 0	12,777	514	13,291	21	1 0	1,204	81	1,285
					28	1 0	1,741	189	1,930
1872.									
April 30	Nil	—	1,826	1,826	1874.				
May 7	1 0	3,934	720	4,654	April 7	1 0	2,512	133	2,645
14	1 0	4,067	664	4,731	14	1 0	2,121	212	2,333
21	1 0	8,880	532	9,412	21	1 0	1,829	154	1,983
28	1 0	5,001	577	5,578	28	1 0	1,748	193	1,941
June 4	1 0	4,870	693	5,563	May 5	1 0	1,600	214	1,814
11	1 0	4,733	611	5,344	12	1 0	1,796	201	1,997
18	1 0	3,392	311	3,703	19	1 0	1,810	230	2,040
25	1 0	4,292	379	4,671	26	1 0	3,874	274	4,148
July 2	1 0	4,081	376	4,457	June 2	1 0	1,979	182	2,161
9	1 0	4,158	338	4,496	9	1 0	1,661	187	1,848
16	1 0	4,278	318	4,596	16	1 0	1,854	214	2,068
23	1 0	4,188	228	4,416	23	1 0	2,010	192	2,202
30	1 0	3,786	268	4,054	30	1 0	1,402	171	1,573
Aug. 6	1 0	3,778	268	4,046	July 7	1 0	1,594	201	1,795
13	1 0	4,196	300	4,496	14	1 0	1,150	159	1,309
20	1 0	5,009	242	5,251	21	1 0	1,709	171	1,880
27	1 0	3,860	222	4,082	28	1 0	1,240	183	1,423
Sept. 3	1 0	3,744	201	3,935	Aug. 4	1 0	1,244	167	1,411
10	1 0	3,589	219	3,808	11	1 0	1,473	156	1,629
17	1 0	3,671	248	3,919	18	1 0	1,845	173	2,018
24	1 0	2,307	190	2,497	25	1 0	1,111	136	1,247
Oct. 1	1 0	2,774	234	3,008	Sept. 1	1 0	930	151	1,081
8	1 0	1,937	226	2,163	8	0 3	3,414	154	3,568
15	1 0	2,333	329	2,662	15	0 3	3,657	179	3,836
					22	0 3	3,651	144	3,795
1873.					29	0 3	3,092	162	3,254
April 15	1 0	3,020	249	3,269	Oct. 6	0 3	2,021	118	2,139
22	1 0	3,357	203	3,560	13	0 3	2,362	117	2,479
29	1 0	3,247	248	3,495	20	0 1	6,495	153	6,648
May 6	1 0	2,930	193	3,123	27	0 1	9,206	153	9,359
13	1 0	3,191	195	3,386					
20	1 0	3,590	202	3,792					
					Grand total			481,417	

Numbers of  
Visitors Daily.RETURN showing the Number of Visitors, &c.—*continued.*

## WEDNESDAYS.

Date.	Fee.	By Payment.	By Tickets.	Total.	Date.	Fee.	By Payment.	By Tickets.	Total.
1871.									
May 3	10 0	518	2,087	2,605	May 28	2 6	1,551	244	1,795
,, 10	2 6	5,338	1,696	7,034	June 4	2 6	1,445	241	1,686
,, 17	7 5	3,157	1,833	4,990	,, 11	2 6	1,472	210	1,682
,, 24	2 6	4,063	903	4,966	,, 18	2 6	1,419	1,607	3,026
,, 31	2 6	3,715	724	4,439	,, 25	2 6	1,201	182	1,383
June 7	7 6	3,415	1,542	4,957	July 2	2 6	1,039	248	1,287
,, 14	2 6	3,186	557	3,743	,, 9	2 6	1,254	180	1,434
,, 21	5 0	3,178	1,539	4,717	,, 16	2 6	945	199	1,144
,, 28	2 6	4,018	715	4,733	,, 23	2 6	635	137	772
July 5	5 0	2,881	1,580	4,461	,, 30	2 6	714	129	843
,, 12	2 6	3,127	740	3,867	Aug. 6	1 0	1,823	127	1,950
,, 19	2 6	2,624	730	3,354	,, 13	1 0	1,678	120	1,798
,, 26	2 6	2,672	555	3,227	,, 20	1 0	2,114	133	2,252
Aug. 2	2 6	2,714	742	3,456	,, 27	1 0	1,545	102	1,647
,, 9	2 6	1,991	408	2,399	Sept. 3	1 0	1,703	111	1,814
,, 16	2 6	1,830	504	2,334	,, 10	1 0	1,689	124	1,813
,, 23	2 6	1,857	327	2,184	,, 17	1 0	1,706	123	1,829
,, 30	2 6	1,964	328	2,292	,, 24	1 0	1,635	142	1,777
Sept. 6	2 6	1,783	449	2,232	Oct. 1	1 0	1,237	111	1,348
,, 13	2 6	2,043	430	2,473	,, 8	1 0	1,047	106	1,153
,, 20	2 6	2,759	795	3,554	,, 15	1 0	1,264	107	1,371
,, 27	2 6	3,809	907	4,716	,, 22	1 0	1,212	128	1,340
					,, 29	1 0	1,340	152	1,492
1872.									
May 1	10 0	162	2,154	2,316	1874.				
,, 8	2 6	1,714	3,525	5,239	April 8	2 6	847	226	1,073
,, 15	2 6	1,896	1,788	3,684	,, 15	2 6	755	217	972
,, 22	1 0	4,867	928	5,795	,, 22	2 6	765	188	953
,, 29	2 6	2,563	796	3,359	,, 29	2 6	666	215	881
June 5	2 6	2,063	1,157	3,220	May 6	2 6	647	223	870
,, 12	2 6	2,057	741	2,798	,, 13	2 6	638	231	869
,, 19	2 6	1,555	588	2,143	,, 20	2 6	641	221	862
,, 26	2 6	1,950	619	2,569	,, 27	2 6	1,142	235	1,377
July 3	2 6	1,647	814	2,461	June 3	2 6	807	179	986
,, 10	2 6	1,710	580	2,290	,, 10	2 6	566	168	734
,, 17	2 6	1,588	598	2,186	,, 17	2 6	819	189	1,008
,, 24	2 6	1,800	387	1,687	,, 24	2 6	658	165	823
,, 31	2 6	1,118	459	1,577	July 1	1 0	1,347	217	1,564
Aug. 7	2 6	936	391	1,327	,, 8	1 0	1,389	180	1,569
,, 14	2 6	922	367	1,289	,, 15	1 0	1,083	198	1,281
,, 21	2 6	986	345	1,331	,, 22	1 0	1,320	162	1,482
,, 28	2 6	871	352	1,223	,, 29	1 0	1,052	177	1,229
Sept. 4	2 6	768	305	1,073	Aug. 5	1 0	1,195	157	1,352
,, 11	2 6	805	316	1,121	,, 12	1 0	1,159	165	1,324
,, 18	2 6	1,059	355	1,414	,, 19	1 0	1,258	149	1,407
,, 25	2 6	1,072	366	1,438	,, 26	1 0	1,085	140	1,225
Oct. 2	1 0	1,923	320	2,243	Sept. 2	1 0	1,001	166	1,167
,, 9	1 0	1,397	245	1,642	,, 9	1 0	1,318	156	1,474
,, 16	1 0	1,874	397	2,271	,, 16	1 0	1,120	137	1,257
					,, 23	1 0	962	127	1,089
1873.									
April 9	Nil	—	791	791	Oct. 7	1 0	607	119	726
,, 16	2 6	1,357	434	1,791	,, 14	1 0	741	132	873
,, 23	2 6	1,351	356	1,707	,, 21	1 0	1,077	181	1,258
,, 30	2 6	1,354	351	1,705	,, 28	1 0	2,258	178	2,436
May 7	2 6	1,305	288	1,593					
,, 14	2 6	1,624	315	1,939					
,, 21	2 6	1,462	184	1,646					
							Grand total		223,636

## RETURN showing the Number of Visitors, &amp;c.—continued.

Numbers of  
Visitors Daily.

## THURSDAYS.

Date.	Fee.	By Payment.	By Tickets.	Total.	Date.	Fee.	By Payment.	By Tickets.	Total.					
<b>1871.</b>														
May 4	10 0	480	1,552	2,032	May 29	1 0	3,707	207	3,914					
" 11	1 0	9,863	672	10,535	June 5	1 0	4,095	193	4,288					
" 18	1 0	9,650	479	10,129	" 12	1 0	3,695	162	3,857					
" 25	1 0	8,873	526	9,399	" 19	1 0	3,100	195	3,295					
June 1	1 0	10,932	389	11,321	" 26	1 0	3,749	166	3,915					
" 8	1 0	9,493	364	9,857	July 3	1 0	2,763	151	2,914					
" 15	1 0	7,968	352	8,320	" 10	1 0	2,757	133	2,890					
" 22	1 0	11,645	936	12,581	" 17	1 0	2,887	156	3,043					
" 29	1 0	9,810	391	10,201	" 24	1 0	2,662	115	2,777					
July 6	1 0	11,030	506	11,536	" 31	1 0	2,207	123	2,330					
" 13	1 0	9,611	421	10,032	Aug. 7	1 0	2,337	114	2,451					
" 20	1 0	10,202	370	10,572	" 14	1 0	2,014	91	2,105					
" 27	1 0	10,348	363	10,711	" 21	1 0	2,269	114	2,383					
Aug. 3	1 0	10,885	321	11,206	" 28	1 0	1,872	131	2,003					
" 10	1 0	8,404	357	8,761	Sept. 4	1 0	1,879	107	1,986					
" 17	1 0	7,502	182	7,684	" 11	1 0	2,148	136	2,284					
" 24	1 0	7,835	216	8,051	" 18	1 0	1,718	119	1,837					
" 31	1 0	8,060	322	8,382	" 25	1 0	1,946	113	2,059					
Sept. 7	1 0	9,310	419	9,729	Oct. 2	1 0	1,182	83	1,265					
" 14	1 0	10,580	327	10,907	" 9	1 0	1,381	102	1,483					
" 21	1 0	13,733	478	14,211	" 16	1 0	1,317	118	1,435					
" 28	1 0	17,433	837	18,270	" 23	1 0	1,067	85	1,152					
					" 30	1 0	1,816	217	2,033					
<b>1872.</b>														
May 2	10 0	172	1,177	1,349	<b>1874.</b>									
" 9	1 0	4,216	566	4,782	April 9	1 0	2,703	160	2,863					
" 16	1 0	4,706	773	5,479	" 16	1 0	2,189	170	2,359					
" 23	1 0	5,887	637	6,524	" 23	1 0	2,065	167	2,232					
" 30	1 0	5,371	751	6,122	" 30	1 0	1,894	183	2,077					
June 6	1 0	5,241	658	5,899	May 7	1 0	2,163	228	2,391					
" 13	1 0	5,663	577	6,240	" 14	1 0	2,319	261	2,580					
" 20	1 0	4,721	418	5,139	" 21	1 0	2,218	219	2,437					
" 27	1 0	4,907	457	5,364	" 28	1 0	2,701	249	2,950					
July 4	1 0	4,333	389	4,722	June 4	1 0	2,139	209	2,348					
" 11	1 0	4,103	320	4,423	" 11	1 0	2,126	203	2,329					
" 18	1 0	4,038	332	4,370	" 18	1 0	2,279	198	2,477					
" 25	1 0	3,839	750	4,589	" 25	1 0	2,390	201	2,591					
Aug. 1	1 0	3,672	308	3,980	July 2	1 0	1,628	203	1,831					
" 8	1 0	3,734	299	4,033	" 9	1 0	1,368	167	1,535					
" 15	1 0	3,786	238	4,024	" 16	1 0	1,280	179	1,459					
" 22	1 0	4,441	256	4,697	" 23	1 0	1,520	200	1,720					
" 29	1 0	3,908	215	4,123	" 30	1 0	1,505	203	1,708					
Sept. 5	1 0	3,899	222	4,121	Aug. 6	1 0	1,536	189	1,725					
" 12	1 0	3,499	245	3,744	" 13	1 0	1,132	153	1,285					
" 19	1 0	3,913	271	4,184	" 20	1 0	1,441	155	1,596					
" 26	1 0	3,906	343	4,249	" 27	1 0	1,161	172	1,333					
Oct. 3	1 0	2,240	227	2,467	Sept. 3	1 0	1,231	161	1,392					
" 10	1 0	2,435	283	2,718	" 10	1 0	1,489	172	1,661					
" 17	1 0	2,556	400	2,956	" 17	1 0	1,183	171	1,354					
					" 24	1 0	1,158	169	1,327					
<b>1873.</b>														
April 10	Nil	—	1,640	1,640	Oct. 1	1 0	693	121	814					
" 17	1 0	3,801	294	4,095	" 8	1 0	908	133	1,041					
" 24	1 0	3,722	236	3,958	" 15	1 0	782	118	900					
May 1	1 0	4,188	253	4,441	" 22	0 1	6,677	194	6,871					
" 8	1 0	2,917	216	3,133	" 29	0 1	13,540	186	13,726					
" 15	1 0	3,793	210	4,003										
" 22	1 0	3,462	201	3,663										
					Grand total					490,269				

Numbers of  
Visitors Daily.

## RETURN showing the Number of Visitors, &amp;c.—continued.

## FRIDAYS.

Date.	Fee.	By Payment.	By Tickets.	Total.	Date.	Fee.	By Payment.	By Tickets.	Total.
1871.									
May 5	10 0	282	1,706	1,988	May 23	1 0	2,984	178	3,162
” 12	1 0	8,359	755	9,114	” 30	1 0	3,177	162	3,339
” 19	1 0	7,802	589	8,391	June 6	1 0	3,640	158	3,798
” 26	1 0	7,819	482	8,301	” 13	1 0	3,182	170	3,352
June 2	1 0	8,691	392	9,083	” 20	1 0	2,467	165	2,632
” 9	1 0	7,144	413	7,557	” 27	1 0	2,870	187	3,057
” 16	1 0	8,664	282	8,946	July 4	1 0	2,576	166	2,742
” 23	1 0	7,458	445	7,903	” 11	1 0	2,822	130	2,952
” 30	1 0	6,779	339	7,118	” 18	1 0	2,286	156	2,442
July 7	1 0	7,902	591	8,493	” 25	1 0	1,901	97	1,998
” 14	1 0	7,782	3,727	11,509	Aug. 1	1 0	1,777	125	1,902
” 21	1 0	7,737	420	8,157	” 8	1 0	1,802	98	1,900
” 28	1 0	7,329	348	7,677	” 15	1 0	1,506	103	1,609
Aug. 4	1 0	6,885	299	7,184	” 22	1 0	1,644	116	1,760
” 11	1 0	5,661	272	5,933	” 29	1 0	1,610	102	1,712
” 18	1 0	4,970	228	5,198	Sept. 5	1 0	1,691	120	1,811
” 25	1 0	5,974	249	6,223	” 12	1 0	1,649	116	1,765
Sept. 1	1 0	5,646	264	5,910	” 19	1 0	1,637	126	1,763
” 8	1 0	6,258	331	6,589	” 26	1 0	1,618	142	1,760
” 15	1 0	7,246	321	7,567	Oct. 3	1 0	1,087	85	1,172
” 22	1 0	9,382	543	9,925	” 10	1 0	976	94	1,070
” 29	1 0	14,197	734	14,931	” 17	1 0	1,190	104	1,294
1872.									
May 3	5 0	766	1,057	1,823	” 24	1 0	2,293	157	2,450
” 10	1 0	4,029	705	4,734	” 17	1 0	2,082	174	2,256
” 17	1 0	3,712	763	4,475	” 24	1 0	1,689	145	1,884
” 24	1 0	5,575	575	6,150	May 1	1 0	2,155	211	2,366
” 31	1 0	4,966	540	5,506	” 8	1 0	1,623	175	1,793
June 7	1 0	4,737	654	5,391	” 15	1 0	1,880	235	2,115
” 14	1 0	4,636	513	5,149	” 22	1 0	1,706	202	1,908
” 21	1 0	3,703	471	4,174	” 29	1 0	2,210	198	2,408
” 28	1 0	4,662	417	5,079	June 5	1 0	1,732	185	1,917
July 5	1 0	3,458	319	3,777	” 12	1 0	1,658	187	1,845
” 12	1 0	3,262	411	3,673	” 19	1 0	2,123	178	2,301
” 19	1 0	3,342	344	3,686	” 26	1 0	1,895	171	2,066
” 26	1 0	2,739	2,905	5,644	July 3	1 0	1,509	203	1,712
Aug. 2	1 0	3,005	294	3,299	” 10	1 0	1,027	156	1,183
” 9	1 0	3,357	284	3,641	” 17	1 0	1,273	154	1,427
” 16	1 0	3,076	251	3,327	” 24	1 0	1,107	139	1,246
” 23	1 0	2,968	211	3,179	” 31	1 0	1,175	151	1,326
” 30	1 0	2,935	202	3,137	Aug. 7	1 0	1,184	182	1,366
Sept. 6	1 0	2,737	216	2,953	” 14	1 0	1,204	161	1,365
” 13	1 0	2,976	245	3,221	” 21	1 0	1,129	127	1,256
” 20	1 0	2,743	220	2,963	” 28	1 0	1,101	139	1,240
” 27	1 0	3,132	307	3,439	Sept. 4	1 0	1,151	149	1,300
Oct. 4	1 0	1,889	223	2,112	” 11	1 0	967	114	1,021
” 11	1 0	1,851	284	2,135	” 18	1 0	1,036	149	1,185
” 18	1 0	1,983	308	2,291	” 25	1 0	1,014	125	1,139
Promenades.	—	—	4,498	4,498	Oct. 2	1 0	419	86	505
1873.									
April 4	Nil	—	915	915	” 9	1 0	603	97	700
” 18	1 0	3,296	233	3,529	” 16	1 0	562	130	692
” 25	1 0	3,448	294	3,742	” 23	0 1	4,922	164	5,086
May 2	1 0	3,076	245	3,321	” 30	0 1	6,133	133	6,272
” 9	1 0	3,072	250	3,322	Grand total				399,070
” 16	1 0	3,115	215	3,330					

RETURN showing the Number of Visitors, &c.—*continued.*Numbers of  
Visitors Daily.

## SATURDAYS.

Date.	Fee.	By Payment.	By Tickets.	Total.	Date.	Fee.	By Payment.	By Tickets.	Total.
1871.					1873.				
May 6	10 0	301	2,573	2,874	July 5	1 0	4,551	979	5,530
," 13	1 0	10,156	1,355	11,514	," 12	1 0	3,983	973	4,956
," 20	1 0	12,782	936	13,718	," 19	1 0	3,685	867	4,552
," 27	1 0	7,228	532	7,760	," 26	1 0	2,482	178	2,660
June 3	1 0	9,043	953	9,996	Aug. 2	1 0	2,129	183	2,312
," 10	1 0	8,854	672	9,526	," 9	0 6	2,533	159	2,692
," 17	1 0	8,069	368	8,437	," 16	0 6	2,901	137	3,038
," 24	1 0	11,374	719	12,093	," 23	0 6	3,576	165	3,741
July 1	1 0	9,559	598	10,157	," 30	0 6	4,626	160	4,786
," 8	1 0	10,504	791	11,295	Sept. 6	0 6	6,089	157	6,246
," 15	1 0	12,055	2,287	14,342	," 13	0 6	4,464	126	4,590
," 22	1 0	7,294	656	7,950	," 20	0 6	3,334	161	3,495
," 29	1 0	9,884	546	10,430	," 27	0 6	3,601	155	3,756
Aug. 5	1 0	11,695	2,758	14,453	Oct. 4	0 6	2,391	178	2,569
," 12	1 0	5,265	393	5,658	," 11	0 6	2,058	154	2,212
," 19	1 0	6,299	308	6,607	," 18	0 6	2,570	185	2,755
," 26	1 0	6,848	267	7,155	," 25	0 6	2,782	181	2,963
Sept. 2	1 0	5,999	460	6,459	1874.				
," 9	1 0	7,090	713	7,803	April 4	Nil	—	1,532	1,532
," 16	1 0	11,181	611	11,792	," 11	1 0	3,164	278	3,442
," 23	1 0	13,584	857	14,441	," 18	1 0	2,772	245	3,017
," 30	1 0	14,605	1,495	16,100	," 25	1 0	2,469	226	2,695
1872.					May 2	1 0	3,287	309	3,596
April 27	Nil	—	10,000	10,000	," 9	1 0	2,797	312	3,109
May 4	5 0	814	1,569	2,383	," 16	1 0	2,816	343	3,159
," 11	1 0	5,760	2,013	7,773	," 23	1 0	2,928	297	3,225
," 18	1 0	5,500	1,205	6,705	," 30	1 0	3,413	350	3,763
," 25	1 0	6,352	1,081	7,433	June 6	1 0	3,110	1,317	4,427
June 1	1 0	7,578	1,919	8,597	," 13	1 0	3,197	281	3,478
," 8	1 0	7,088	930	8,018	," 20	1 0	4,730	1,578	6,308
," 15	1 0	5,476	766	6,242	," 27	1 0	2,703	290	2,993
," 22	1 0	5,515	764	6,279	July 4	1 0	2,557	275	2,832
," 29	1 0	5,496	698	6,194	," 11	1 0	3,617	1,259	4,876
July 6	1 0	3,905	561	4,466	," 18	1 0	1,754	264	2,018
," 13	1 0	3,862	548	4,410	," 25	1 0	1,757	252	2,009
," 20	1 0	4,071	580	4,651	Aug. 1	1 0	1,562	205	1,767
," 27	1 0	3,351	438	3,789	," 8	1 0	1,741	229	1,970
Aug. 3	1 0	3,297	445	3,742	," 15	1 0	1,973	210	2,183
," 10	1 0	3,797	480	4,277	," 22	1 0	1,556	264	1,820
," 17	1 0	3,428	353	3,781	," 29	1 0	1,698	226	1,924
," 24	1 0	3,239	368	3,607	Sept. 5	0 3	3,000	256	3,256
," 31	1 0	3,647	428	4,075	," 12	0 3	5,389	239	5,628
Sept. 7	1 0	3,155	334	3,489	," 19	0 3	5,734	250	5,984
," 14	1 0	3,464	375	3,839	," 26	0 3	5,527	236	5,763
," 21	1 0	3,633	411	4,044	Oct. 3	0 3	3,640	198	3,838
," 28	1 0	4,361	570	4,931	," 10	0 3	4,258	207	4,465
Oct. 5	1 0	2,681	400	3,081	," 17	0 3	4,534	211	4,745
," 12	1 0	2,794	512	3,306	," 24	0 1	11,049	191	11,240
," 19	1 0	2,363	697	3,060	," 31	0 1	13,832	259	14,091
1873.							Grand total	596,838	
April 19	1 0	4,702	455	5,157					
," 26	1 0	5,152	419	5,571					
May 3	1 0	5,848	1,312	7,150					
," 10	1 0	4,758	357	5,115					
," 17	1 0	5,205	947	6,152					
," 24	1 0	5,083	313	5,396					
," 31	1 0	4,856	944	5,800					
June 7	1 0	4,257	291	4,548					
," 14	2 6	2,374	1,662	4,036					
," 21	2 6	1,778	2,040	3,818					
," 28	1 0	3,170	187	3,357					

## ABSTRACT.

Mondays	-	-	564,671
Tuesdays	-	-	481,417
Wednesdays	-	-	223,636
Thursdays	-	-	490,269
Fridays	-	-	399,070
Saturdays	-	-	596,838
Total	-	2,755,901	

E. G. CLAYTON, Capt. R.E.

## APPENDIX LVII.

1874.

Comparison  
of Numbers and  
Receipts.

## COMPARISON of NUMBERS and RECEIPTS at various Rates of Admission.

—	Average Receipts.	Average Admissions.	REMARKS.
Shilling weeks, exclusive of Bank } holiday weeks - - - }	£531	11,473	
Three-penny weeks - - -	£242	14,749	
One-penny weeks - - -	£247	45,968	

## ADMISSION OF SCHOOLS, &amp;c.

It was resolved in 1871 that school children in parties of not less than 50, accompanied by their teachers, should be admitted at a charge of 6d. each, and this rule was followed in the subsequent years.

E. G. CLAYTON, Capt. R.E

## APPENDIX LVIII.

## ANNUAL INTERNATIONAL EXHIBITIONS.

RECEIPTS and NUMBERS during the years 1871-4.

## No. I.

Receipts and  
Numbers.

Year.	Season Tickets.			Receipts by Payment at the Doors, including Value of Tickets passed.	Net Receipts.	No. of Admissions.	Total each Year.
	Price.	No. sold.	Gross Receipts.				
1871	£ s.		£ s. d.		£ s. d.	No. of Admissions.	Total each Year.
	3 3	1,830	5,764 10 0				
	2 2	1,296	2,721 12 0				
	1 1	32	33 12 0				
			8,519 14 0				
1872	2 2	357	749 14 0		2,707 4 0	97,580	97,580
	1 1	2,306	2,421 6 0				
			3,171 0 0				
1873	1 1	505	530 5 0		530 5 0	42,370	42,370
1874	5 0	115	575 0 0		795 0 0	40,942	40,942
	3 0	14	42 0 0				
	2 0	89	178 0 0				
			795 0 0				
1871	10s. days	—	—	1,034 0 0		2,068	
	2s. 6d. "	—	—	7,765 10 0		62,124	
	1s. "	—	—	48,749 14 0		974,994	
				57,549 4 0	57,263 16 9	—	1,039,186
1872	10s. "	—	—	167 0 0	—	334	
	5s. "	—	—	395 0 0	—	1,580	
	2s. 6d. "	—	—	3,572 10 0	—	28,580	
	1s. "	—	—	25,007 11 0	—	500,151	
	6d. evenings.	—	—	473 7 6	—	18,935	
				29,615 8 6	29,631 18 1*	—	549,580
1873	2s. 6d. days	—	—	2,539 10 0	—	20,316	
	1s. "	—	—	18,633 3 0	—	372,663	
	6d. "	—	—	1,612 6 6	—	64,493	
				22,784 19 6	19,832 1 3	—	457,472
1874	2s. 6d. "	—	—	1,118 17 6	—	8,951	
	1s. "	—	—	13,149 7 0	—	262,987	
	3d. "	—	—	866 16 0	—	69,344	
	1d. "	—	—	352 3 5	—	84,521	
				15,487 3 11	13,705 2 10	—	425,803
							2,755,901

\* Net receipts in 1872 include money taken for promenades.

E. G. CLAYTON, Capt. R.E.

Receipts and  
Numbers.

## APPENDIX LIX.

## ANNUAL INTERNATIONAL EXHIBITIONS.

RECEIPTS and NUMBERS during the Years 1871-4.

No. II.

Year.	Season Tickets sold at					Admissions.					Total Admis-sions each Year.	Net Receipts for Season Tickets.	Net Receipts for Admissions.	Total Net Receipts each Year for Season Tickets and Admissions.	
	5l.	3l.	3s.	2l.	2s.	1l.	1s.	6d.	3d.	1d.					
1871	-	1,830	-	1,296	-	32	3,158	102,968	2,068	-	62,124	974,994	-	-	
1872	-	-	357	-	2,306	2,663	97,580	334	1,580	28,580	500,151	18,935	-	-	
1873	-	-	-	-	505	505	42,370	-	-	20,316	372,663	64,493	-	-	
1874	115	-	14	-	89	-	218	40,942	-	-	8,951	262,987	-	-	
Total	115	1,830	14	1,653	89	2,843	6,544	283,850	2,402	1,580	119,971	2,110,795	83,428	69,344	84,521
												2,755,901		12,148	8
													0	120,187	16
													1	132,335	4

E. G. CLAYTON, Capt. R.E.

## APPENDIX LX.

## ANNUAL INTERNATIONAL EXHIBITIONS.

RETURN showing the Number of Foreign and Colonial Packages received each Year into the Buildings.  
(Note.—In 1871 the Indian Packages were not registered in the Registers of Her Majesty's Commissioners.)

Year.	Foreign Countries.																			Colonies.					Total.									
	Algeria.	Austria.	Belgium.	Borneo.	Califorinia.	China.	Denmark.	Egypt.	Greece.	Hanover.	Holland.	Hungary.	Italy.	Japan.	Perisia.	Portugal.	Russia.	Spain.	Switzerland.	Turkey.	United States.	Westphalia.	South Sea Islands.	African Colonies.	Hong Kong.	Nova Scotia.	St. Vincent.							
1871	-	159	416	-	-	42	19	662	235	-	4,107	109	4	105	2	8	5	8	4	1	1	4	2	-	-	76	9	-	1	-	1,984			
1872	-	45	524	-	-	1	1	-	682	119	-	14	1	72	-	39	-	35	-	1	-	1	2	1	-	-	12	-	218	-	-	1,768		
1873	5	21	237	1	-	12	25	3	108	119	-	33	-	74	52	84	-	2	15	8	17	1	-	8	6	-	17	-	758	-	159	1	-	1,766
1874	-	115	436	-	29	3	16	-	432	335	21	77	406	225	14	48	-	1,199	131	1,910	6	-	-	1	-	-	-	9	103	-	175	-	2	4,793
<b>Totals</b>	<b>5</b>	<b>340</b>	<b>1,613</b>	<b>1</b>	<b>29</b>	<b>16</b>	<b>84</b>	<b>22</b>	<b>1,884</b>	<b>808</b>	<b>21</b>	<b>128</b>	<b>514</b>	<b>480</b>	<b>70</b>	<b>276</b>	<b>2</b>	<b>1,209</b>	<b>186</b>	<b>1,026</b>	<b>28</b>	<b>2</b>	<b>1</b>	<b>14</b>	<b>10</b>	<b>1</b>	<b>17</b>	<b>9</b>	<b>949</b>	<b>9</b>	<b>552</b>	<b>2</b>	<b>2</b>	<b>10,311</b>

N

1st December 1874.

E. G. CLAYTON, Capt. R.E.

Foreign  
and Colonial  
Goods.

British Goods.

## APPENDIX LXI.

## ANNUAL INTERNATIONAL EXHIBITIONS.

## RECEIPT OF BRITISH GOODS.

RETURN showing the Number of Objects belonging to the various Classes admitted to the Exhibition.

Year.	DIVISION I.							DIVISION II.							DIVISION III.		
	Class.							Class.							Class.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	Total	—	—	
1871	2,865	1,025	755	406	283	284	566	10,309	1,725	3,717	—	—	—	582	22,517		
1872	1,800	449	432	125	278	154	141	2,044	3,511	428	7	3,727	—	433	13,529	Total—Fine Arts 17,169	
1873	3,106	354	238	154	195	148	6	1,529	1,319	1,142	374	5,406	5	182	14,158	Industries 41,943	
1874	1,983	650	336	158	65	187	16	973	1,805	190	1,721	1,111	—	170	9,375	Inventions 1,367	
Total	9,754	2,488	1,761	843	821	773	729	14,855	8,360	5,477	2,102	10,244	5	1,367	59,579	59,579	

20th November 1874.

E. G. CLAYTON, Capt. R.E.

## APPENDIX LXII.

## ANNUAL INTERNATIONAL EXHIBITIONS.

RETURN showing the mean Temperature inside and outside the Buildings for Temperature, each Month during which the Exhibition was open.

Date.				Inside.	Outside.	Remarks.
1871. May	-	-	-	59.50	59.50	
" June	-	-	-	61.25	61.00	
" July	-	-	-	67.50	67.25	
" August	-	-	-	69.75	72.00	
" September	-	-	-	63.25	61.75	
Mean for the year				64.25	64.50	
1872. May	-	-	-	60.00	53.50	
" June	-	-	-	66.50	66.25	
" July	-	-	-	71.00	73.00	
" August	-	-	-	67.00	68.00	
" September	-	-	-	65.50	63.50	
" October	-	-	-	57.50	51.50	
Mean for the year				64.58	62.62	
1873. April	-	-	-	57.00	58.00	
" May	-	-	-	59.75	63.00	
" June	-	-	-	67.25	70.75	
" July	-	-	-	68.50	78.25	
" August	-	-	-	68.00	72.75	
" September	-	-	-	61.50	63.00	
" October	-	-	-	58.50	53.25	
Mean for the year				62.92	65.57	
1874. April	-	-	-	59.50	63.00	
" May	-	-	-	57.50	61.25	
" June	-	-	-	64.50	70.00	
" July	-	-	-	69.00	76.25	
" August	-	-	-	65.25	69.25	
" September	-	-	-	63.25	65.00	
" October	-	-	-	60.50	56.00	
Mean for the year				62.79	65.96	

E. G. CLAYTON, Capt. R.E.

## PRINTED DOCUMENTS and FORMS used in carrying on the BUSINESS of the LONDON INTERNATIONAL EXHIBITIONS in the YEARS 1871, 2, 3, 4.

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Printed  
Documents  
and Forms.

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	80.	Circular substituted for No. 74.	123.	Do. enclosing Form No. 121.
	80a.	Do. requesting that Objects may be forwarded before the 28th of February.	124.	Return of Visitors in various Rooms at specified Times.
	81.	Fires authorised.	125.	Circular to Adjutants of Militia on Camp Cooking.
	82.	Circular acknowledging Form No. 76.	126.	Summons to Board of Management.
	83.	Do. transmitting Press Pass.	127.	Statement of Moneys paid into Bank of England.
	84.	Orders for the Fire Piquet.	128.	Price Clerk's Book.
	85.	Directions for removal of Exhibits to rooms as received.	129.	List of Persons holding Keys of the outer doors of the Exhibition.
	86.	School of Popular Cookery.	130.	Admission at reduced charges on Mondays and Saturdays.
	87.	Notice of rejection (Loans).	131.	Circular stating that loans have been returned.
	88.	Periodical state of Turnstile Registers.	131a.	Form of Receipt to accompany No. 131.
	89.	Information respecting fetching and returning Pictures on loan.	132.	List of Articles returned.
	90.	Daily return of Inspector of Entrances.	133.	Label for return of Works of Art.
	91.	Special Musical Programme.	134.	Rules for removal of British goods.
	92.	Form for complaints.	135.	Weekly return of the removal of goods (British).
	93.	Report of Season Tickets lost.	136.	Do. (Foreign).
	94.	Circular enclosing Season Ticket.	137.	Foreign goods' pass.
	94a.	Do. (special privilege).	138.	Customs' regulations and rules for removal of Foreign and Colonial goods.
	95.	Circular relative to the delivery of British Goods.		Do. (French).
	96.	Rules relating to opening cases.	138a.	British Customs Tariff.
	97.	List of works by J. Phillip, R.A., and T. Creswick, R.A.		Do. (French).
	98.	Circular as to reception of carriages.	139.	Instructions for Superintendents and Clerks employed in removal of British goods.
	99.	Insurance of Pictures and Works of Art.	140.	British goods' pass.
	100.	Memorandum for Catalogue numbers.	141.	List of City Companies.
	101.	Rules for Gallery Superintendents.	142.	Proposed dinner on 31st October.
	102.	Instructions to Money Takers, Attendants, &c.	143.	Additional Instructions for Doorkeepers and Gatekeepers.
	103.	Notice relating to exclusion of Works of Art from Picture Galleries.	144.	Rules regarding sale of goods from 20th to 31st October.
	104.	List of books from which "Recipes" have been selected for the School of Popular Cookery.	145.	Notice to Exhibitors that small portable objects may be sold and removed.
	105.	Return of tickets sold for Daily Concerts in the Royal Albert Hall.	146.	Circular in reply to Applications for Medals.
	106.	Daily record of number of Visitors for Editors of the Press.	147.	Letter as to Catalogues of the Works by Phillip and Creswick.
	107.	Memorandum of Bank Credits.	147a.	Slip to accompany ditto.
	108.	Musical Arrangements for daily performances in the Royal Albert Hall.	148.	Recommending Employes for certificate.
	109.	Admission of Schools.		

No.	NATURE OF DOCUMENT.	Printed Documents and Forms.
149.	Circular requesting removal of goods.	
150.	Circular requesting acceptance of the Special Catalogues of the Works of Phillip and Creswick.	
150a.	Form for acknowledging receipt of the same.	
151.	Circular to Permanent Committee for British Pictures, presenting Special Catalogues of the Works of Phillip and Creswick.	
151a.	Form for acknowledging receipt of the same.	
152.	Circular accompanying Medal to Her Majesty's Commissioners.	
152a.	Form for acknowledging receipt of the same.	
153.	Circular accompanying Medal to Contributors.	
153a.	Form for acknowledging receipt of the same.	
154.	Circular to Lenders of Works by Phillip and Creswick, to accompany copies of the Special Catalogues.	
154a.	Form for acknowledging receipt of the same.	
155.	Circular to Exhibitors stating that the Medals are ready to be issued.	

## INDEX, 1874.

No.	NATURE OF DOCUMENT.	
DIRECTORY.		
1.	General Regulations.	
	Do. French.	
	Do. German.	
	Do. Spanish.	
Special Rules for—		
2.	Works of Art.	
	Do. Spanish.	
3.	Manufactures.	
	Do. French.	
	Do. German.	
	Do. Spanish.	
4.	Recent Scientific Inventions and Discoveries.	
	Do. Spanish.	
5.	Rules for the Preparation of Diagrams of ancient and modern Buildings of all countries.	
6.	Special Rules for Foreign Wines.	
	Do. French.	
	Do. German.	
	Do. Spanish.	
	Do. Italian.	
	Do. Portuguese.	
7.	Regulations for Foreign Objects sent through Foreign Governments.	
8.	Statement of amount and nature of space required by Foreign Governments, &c.	
9.	Authority to Messrs. Chaplin and Horne to receive goods.	
10.	Preliminary Application.	
	Do. French.	
	Do. German.	
10a.	Preliminary Application.	
	Do. French.	
	Do. German.	
11.	Rules relating to Works of deceased Artists.	
12.	To Proprietors of Interesting Specimens of Architecture.	
13.	Rules respecting Objects Lent.	
14.	Memorandum by Sub-Committee for Colonial Wines.	
15.	Exhibition of Illustrations in Civil Engineering, &c.	
16.	Special note on the Fine Arts Division.	
17.	Circular Letter to accompany Form No. 16.	
17a.	Do. Do. Do.	
18.	Memorandum upon the representation of Foreign Fine Arts.—French.	
18a.	Do. German.	
18b.	Do. Italian.	
19.	Labels to be attached to Objects.	
20.	Circular acknowledging receipt of Preliminary Application.	
20a.	Do. Do. Do.	
21.	General conditions for Exhibitors of Prime Movers.	
22.	Regulations for the working of Machinery in Motion.	
23.	Form for Estimates.	
23a.	Estimates for 1874.	
25.	Rules for Officers, Attendants, &c.—Department of Management.	
25.	Circular Letter explaining that space cannot be allotted until the objects have been approved by the Committee of Selection.	
26.	Memorandum from the Registry to return documents.	
27.	Circular Letter. Competition for Prizes offered by Society of Arts.	
28.	Summons for Committee.	
28a.	Do.	
29.	National Association for the Promotion of Technical Instruction.	
29a.	Form for Subscribers to the above.	
30.	Circular acknowledging receipt of letter.	
31.	Delivery order.	
32.	Rules for the reception of Stoves competing for Society of Arts' Prizes.	
33.	Circular Letter transmitting Rules for Exhibition of Foreign Wines.	
34.	Rules respecting Objects Lent.	
34.	Conditions of Tender for privilege of taking and selling Photographs.	
36.	Form for Exhibitors of ancient Lace.	
36a.	Instructions for filling up the above.	
37.	Form for Exhibitors of Saddlery and Harness made before 1800.	
38.	Reception of goods—Daily Report of Superintendent.	
39.	Rules for the reception of Foreign and Colonial goods.	
40.	Rules for the reception of British goods.	
41.	Admission of Persons during the arrangement of the Exhibition.	

Printed Documents and Forms.	No.	NATURE OF DOCUMENT.	No.	NATURE OF DOCUMENT.
	42.	Instructions for Superintendents and Clerks employed with Committees of Selection.	76.	Circular Letter on the allotment of space for Wine.
	43.	Form for List of rejected objects.	76a.	Do. do. (subject to the approval of French Commissioner).
	44.	Notice of rejection of objects (plural).	77.	Circular Letter with Forms and Labels to intending Exhibitors.
	44a.	Do. (singular).	78.	Circular Letter acknowledging receipt of Form No. 29a.
	45.	Instructions regarding reception of Foreign goods	79.	Memorandum on the Ethnology and Geography of the British Empire.
	46.	Receipt of British goods.	79a.	Do. do.
	47.	Circular in reply to application for employment (special).	80.	Ethnology, &c. Loan Form.
	48.	Circular in reply to application for employment (ordinary).	81.	Form for fires authorised.
	49.	Report of cases opened.	82.	Voucher for Day Work.
	50.	Agreement to pay Head Money for the privilege of showing processes and selling articles manufactured in the Exhibition.	82a.	Do. do.
	51.	Abstract of Register of Weather, &c.	83.	Circular enclosing Press Pass.
	52.	Daily Return of Visitors.	84.	Memorandum on the Exhibiting and Tasting of Wines.
	53.	General conditions for Refreshment Contract.	85.	Circular acknowledging receipt of subscription.
	54.	Instructions for Superintendents and Clerks employed during reception and arrangement of British goods.	86.	Description of Passes available.
	55.	Memorandum on the Protection of Inventions Act.	87.	Contemplated alteration in the supply of Refreshments.
	56.	Memorandum on the Exhibition of Book-binding.	88.	Periodical statement of Turnstile Registers.
	57.	Memorandum on the Exhibition of Lace —ancient and modern.	89.	Instructions to Foreign Goods' Clerk.
	58.	Circular acknowledging receipt of Form No. 34.	90.	Return of Inspectors in charge of entrances to the Exhibition.
	58a.	Do. Do.	91.	Notice to Exhibitors with instructions for labelling objects, &c.
	59.	Return of the Chief Inspector of Money-taking Attendants, &c.	92.	Form for complaints.
	60.	Circular Letter (Army and Navy).	93.	Form for report of lost Season Tickets.
	61.	Rules for Army and Navy Amateur Fine Arts Annual Exhibition.	94.	Circular enclosing Season Ticket.
	62.	Form for instructions for correspondence.	94a.	Do. do. (special).
	63.	Illustrations of the Working of the Art Schools in the United Kingdom.	94b.	Do. do. (to H.M. Commissions).
	64.	Pay List.	95.	Regulations to be observed in regard to Wines on which duty has not been paid.
	65.	Wages List.	96.	Rules relating to opening cases.
	66.	Exhibition of hand-made Lace.	97.	Circular Letter enclosing Forms 70, 84, and 95.
	67.	Rules for the Registry of Objects selected for Purchase.	98.	Space for Refreshment Bars.
	67a.	Price Clerk's Forms.	99.	Orders for the Fire Piquet.
	67b.	Do.	100.	Circular Letter from Board of Management enclosing Tickets for Concerts.
	67c.	Do.	101.	Rules for Gallery Superintendents.
	68.	Distribution of objects.	102.	Circular Letter for engagement of services.
	69.	Circular Letter stating that the application to exhibit is too late.	103.	Do. transmitting Season Ticket to Subscribers to the Association for Technical Instruction.
	70.	Rules for the reception of Wines.	103a.	Do. do.
	71.	Weekly return of the receipt of Foreign and Colonial goods.	103b.	Do. do. (explaining when Artizans' Tickets will be available).
	72.	Slip inviting the opinion of Exhibitors as to the advantages they may have derived from the Annual International Exhibitions.	104.	Instructions to Money Takers, Attendants, &c.
	73.	Foreign Label.	105.	Circular Letter to Exhibitors of Machinery in Motion.
	74.	Circular Letter stating that objects proposed for exhibition are not eligible.	106.	Daily Report of the number of Visitors to Exhibition.
	75.	Circular acknowledging receipt of letter	107.	Memorandum of Bank Credits.
			108.	Rules for the Lift.
			109.	Circular Letter requesting purchases money for Exhibits selected
			109a.	Circular Letters acknowledging Cheque.

No.	NATURE OF DOCUMENT.	Printed Documents and Forms.
109b.	Circular Letter transmitting Cheque to Exhibitor.	128. Statement of cash counted.
110.	Notice requesting registered letters and documents to be returned to the Registry.	129. Rules regarding sale of goods from 1st to 31st October.
111.	Voucher to Accountant.	130. Additional instructions for Doorkeepers and Gatekeepers.
111a.	Do. do.	131. Circular returning Loans.
112.	Statement of moneys paid into the Bank of England.	131a. Receipt for Loans returned.
113.	Circular Letter for obtaining Season Ticket.	132. List of Articles returned.
113a.	Do. do.	133. Label—"Works of Art."
114.	Circular Letter stating when Artizan Tickets will be available.	134. Rules for the removal of British goods.
115.	Form for cab hire, omnibus, and railway fares.	135. Removal of British goods.—Weekly Re-
116.	Form for Travelling Expenses.	turn.
117.	Daily return of Meteorological Observa- tions.	136. Removal of Foreign goods.—Weekly
118.	Memorandum to Exhibitors of Foreign Wines.	Return.
119.	Circular to Subscribers to National As- sociation for Technical Instruction. Report of Sub-committee for—	137. Foreign goods' pass.
120.	Architecture.	138. Customs regulations and rules for the
121.	Sanitary Apparatus.	removal of Foreign and Colonial
122.	Civil and Mechanical Engineering.	goods.
123.	Return showing Admissions and Receipts for each Week.	138. Do. French.
124.	Return of Daily Admissions.	138a. British Customs' Tariff.
125.	Return of Admissions for each Day of the Week.	138a. Do. French.
126.	Notice to Exhibitors. — Sale and Re- moval of small Portable Objects.	139. Instructions for Superintendents and
127.	Memorandum on special collection of works of late Mr. Owen Jones.	Clerks employed in the removal of goods of British Exhibitors.
140.	British goods' pass.	140. British goods' pass.
141.	Circular in reply to Inquiry for Medals.	141. Circular in reply to Inquiry for Medals.
142.	Statement showing Result of Admission	at Threepence.
143.	Circular to Exhibitors to remove ob- jects.	143. Circular to Exhibitors to remove ob-
144.	Circular to accompany Medal issued for services.	jects.
145.	Circular to accompany Medal issued to Lenders.	144. Circular to accompany Medal issued for
146.	Receipt for Medal.	services.
147.	Authority to receive Exhibitors' Medals.	145. Circular to accompany Medal issued to Lenders.

## APPENDIX LXIV.

STATEMENT of the NUMBER of LETTERS and other DOCUMENTS  
received and issued in connexion with the ANNUAL  
INTERNATIONAL EXHIBITIONS.

With a view to economy, the experiment of registering only the more important of the papers received was tried at the commencement of these Exhibitions, and continued to some extent to the end of 1871.

The number of documents thus received and registered from July 1869 to the end of 1871 was 16,956, and the number received but not registered 8,942. During the same period the number of letters sent out amounted to 19,994, and as nearly as can be estimated the number of circulars issued was 83,325.

But this partial registration proved insufficient, and it was found necessary to register all letters and documents received, and to keep a more precise record of the circulars issued.

The following is a summary of the receipts and issues during the whole period :—

—	Received Letters, &c.	Issued.		Total.
		Letters.	Circulars.	
July 1869 to the end of 1871 -	25,898	19,994	83,325	129,217
1872 -	15,121	15,735	10,472	41,328
1873 -	15,706	14,808	30,953	61,467
1874 -	13,878	14,698	28,257	56,833
	70,603	65,235	153,007	288,845

Subjoined is a tabular statement of the number of documents received and issued during each month of 1872-3-4.

### 1872.

—	Received Letters, &c.	Sent out.		Total.
		Letters.	Forms.	
January -	1,164	1,537	797	3,498
February -	1,383	1,321	700	3,404
March -	1,967	2,076	334	4,377
April -	2,511	2,011	1,150	5,672
May -	1,686	1,449	993	4,128
June -	880	753	949	2,582
July -	823	807	1,646	3,276
August -	591	982	1,616	3,189
September -	526	632	501	1,659
October -	1,288	1,081	495	2,864
November -	1,571	1,574	236	3,381
December -	731	1,512	1,055	3,298
Total -	15,121	15,735	10,472	41,328

1873.

		Received Letters, &c.	Sent out.		Total.
			Letters.	Forms.	
January	-	-	1,137	1,142	4,201
February	-	-	1,677	2,092	5,755
March	-	-	2,545	2,504	5,940
April	-	-	2,547	1,505	5,271
May	-	-	1,567	1,071	3,699
June	-	-	941	1,002	2,930
July	-	-	734	901	2,312
August	-	-	587	735	4,079
September	-	-	511	638	2,901
October	-	-	726	708	3,792
November	-	-	1,171	1,013	8,533
December	-	-	1,563	1,497	12,054
Total	-	-	15,706	14,808	61,467

1874.

January	-	-	-	1,981	1,626	7,119	10,726
February	-	-	-	2,575	2,038	2,590	7,203
March	-	-	-	2,664	2,799	5,171	10,634
April	-	-	-	1,797	1,744	2,943	6,484
May	-	-	-	1,104	1,233	2,332	4,669
June	-	-	-	559	1,180	1,261	3,000
July	-	-	-	481	699	1,077	2,257
August	-	-	-	361	422	1,063	1,846
September	-	-	-	407	540	1,257	2,204
October	-	-	-	635	868	2,515	4,018
November	-	-	-	827	875	667	2,369
December	-	-	-	487	674	262	1,423
Total	-	-	-	13,878	14,698	28,257	56,833

T. A. WRIGHT,  
Secretary to the Executive.

## APPENDIX LXV.

## ANNUAL INTER-

## A GENERAL ACCOUNT showing the RECEIPT and EXPENDITURE on ACCOUNT OUTSTANDING

RECEIPTS.	1871.	1872.	1873.	1874.	Totals.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Money borrowed by the Royal Commissioners, and advanced to defray Works of a permanent nature connected with the Series of Annual Exhibitions - -	80,000 0 0	20,000 0 0	21,186 0 0	30,000 0 0	151,186 0 0
Receipts for admissions, &c. to the Exhibitions, viz.:—					
Season Tickets -	8,115 19 0	2,707 5 10	530 5 0	846 3 8	135,677 7 1
Other Receipts for Admissions -	59,865 9 5	29,691 3 7	19,926 10 9	13,994 9 10	
Catalogues and Miscellaneous Receipts -	8,452 8 6	6,907 11 1	7,305 0 11	1,558 8 9	
	76,433 16 11	39,306 0 6	27,761 16 8	16,399 2 3	159,900 16 4
	156,433 16 11	59,306 0 6	48,947 16 8	46,399 2 3	311,086 16 4

No. of Visitors -	-	-	1871	-	-	1,142,154
" "	-	-	1872	-	-	647,160
" "	-	-	1873	-	-	499,842
" "	-	-	1874	-	-	466,745

ASSETS.—Cost of Purchases (unsold) - - - 3,344*l.* 6*s.* 11*d.*

Glass cases and fittings estimated to be worth 8,000*l.*, a part of which has been realized.

Examined and approved.

W. G. ANDERSON,

4 May 1875.

## APPENDIX LXV.

## NATIONAL EXHIBITIONS.

of the SERIES of ANNUAL EXHIBITIONS from 1871 to 1874, including LIABILITIES.

EXPENDITURE.	1871.	1872.	1873.	1874.	Totals.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Works of a permanent nature, chargeable against Money borrowed, viz.:—					
Buildings -	93,180 0 0	8,055 15 0*	—	4,503 15 0†	105,739 10 0
Machinery -	5,314 19 2	78 15 5	—	—	5,393 14 7
Fittings -	13,755 1 6	947 19 8	505 0 0	42 0 0	15,250 0 9
	112,250 0 8	9,082 9 8	505 0 0	4,545 15 0	126,883 5 4
WORKS CHARGEABLE AGAINST CURRENT RECEIPTS:—					
Secretariat (Salaries and Expenses) -					
General Management (ditto) -					
Manufactures, Machinery, and Buildings (Salaries and Expenses) -	49,603 10 0	39,921 2 2	34,493 15 3	29,323 19 8	153,342 7 1
Fine Art Department (ditto) -					
Interest on borrowed Moneys -	4,129 2 11	4,799 13 5	4,394 8 4	2,096 18 5	15,420 3 1
Payments to the Royal Horticultural Society -	5,030 0 11	365 5 10	1,000 0 0	750 0 0	7,145 6 9
	58,762 13 10	45,086 1 5	39,888 3 7	32,170 18 1	175,907 16 11
	171,012 14 6	54,168 11 1	40,393 3 7	36,716 13 1	302,291 2 3
				Balance -	8,795 14 1
					£ 311,086 16 4

\* Including purchase of Belgian Annexe.

† Purchase of the French Annexe.

JAMES RICHARDS,  
Accountant.

## APPENDIX LXVI.

Detailed  
Receipts and  
Expenditure.

## STATEMENT of the RECEIPTS of the ANNUAL INTERNATIONAL EXHIBITIONS showing the Revenue of each year's Exhibition.

—	1871.	1872.	1873.	1874.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Season tickets	8,649 12 0	2,707 3 10	530 5 0	846 3 8*	12,733 4 6
Daily admissions	56,730 3 9	29,691 3 7	19,926 10 9	13,994 9 10	120,342 7 11
Admissions to Horticultural Gardens.	2,601 12 8	—	—	—	2,601 12 8
Retiring rooms	970 14 10	513 16 2	332 15 2	237 9 3	2,054 15 5
Lift	555 11 9	—	380 14 3	253 15 4	1,190 1 4
Concerts in hall	1,538 4 1	66 8 4	1,138 10 6	—	2,743 2 11
Sundry receipts, including catalogue and refreshment contracts.	5,387 17 10	6,327 8 7	3,577 4 1	940 15 11	16,233 6 5
School of cookery and sale of books.	—	—	1,875 16 11	24 13 3	1,900 10 2
Admission to wine vaults	—	—	—	101 15 0	101 15 0
	76,433 16 11	39,306 0 6	27,761 16 8	16,399 2 3†	159,900 16 4

\* Chiefly subscriptions to promote visits for technical instruction.

† Receipts to 31st March 1875, 15,973*l.* 7*s.* 3*d.*; assets, 425*l.* 15*s.*

## STATEMENT of the EXPENDITURE of the ANNUAL INTERNATIONAL EXHIBITIONS showing the Cost of Management of each Exhibition to 31st December 1874.

—	1871.	1872.	1873.	1874.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Salaries and wages	18,974 13 7	8,780 2 3	13,960 3 2	10,605 7 0	52,320 6 0
Travelling	549 2 1	416 15 4	132 1 11	115 8 4	1,213 7 8
Printing and stationery	2,044 15 9	1,561 2 4	1,495 14 1	1,216 7 3	6,317 19 5
Postage and telegrams	647 18 3	586 11 1	393 0 1	300 7 6	1,927 16 11
Fire brigade and police	4,170 17 3	4,572 12 9	1,805 6 4	2,879 2 1	13,427 18 5
Purchases and carriage of works of art.	3,102 9 10	965 14 1	1,321 0 7	747 13 4	6,136 17 10
Fuel and light	339 3 11	1,037 0 7	Included in water.	Included in water.	1,376 4 6
Water	387 1 5	221 13 9	533 16 8	667 2 6	1,809 14 4
Sundries	2,484 7 6	642 16 9	321 18 2	439 9 4	3,888 6 9
Advertisements	5,842 15 2	8,651 10 3	1,942 16 8	1,948 8 6	12,885 10 7
Reports, guides, and publications.	878 18 0	343 18 11	157 16 0	335 8 1	1,716 1 0
Rent, taxes, insurance, &c.	255 12 0	418 10 8	200 7 3	225 17 6	1,100 7 5
Opening ceremonial	1,458 7 7	606 16 2	—	—	2,065 3 9
Music, bands, and organists	5,007 7 8	1,860 12 6	476 10 0	724 0 0	8,068 10 2
Interest on borrowed capital	4,129 2 11	4,799 13 5	4,394 8 4	2,096 18 5	15,420 3 1
Royal Horticultural Society	5,030 0 11	365 5 10	1,000 0 0	750 0 0	7,145 6 9
Royal Albert Hall (for use of)	3,960 0 0	—	3,425 15 10	3,543 10 5	10,929 6 3
Buildings, machinery, fitments	—	4,595 2 0	—	—	4,595 2 0
Maintenance, reception, and arrangement.	—	8,777 8 9	4,198 12 3	3,241 19 7	16,218 0 7
Processes, including school of cookery.	—	882 14 0	2,962 14 0	981 11 9	4,826 19 9
Medals	—	—	887 14 7	932 16 10	1,820 11 5
Shah of Persia's visit	—	—	278 12 8	—	278 12 8
Ethnological Museum	—	—	—	419 9 8	419 9 8
	58,762 13 10	45,086 1 5	39,888 3 7	32,170 18 1‡	175,907 16 11

‡ Payments to 31st March 1875, 31,092*l.* 11*s.* 5*d.*; liabilities, 1,078*l.* 6*s.* 8*d.*

J. G.

STATEMENT of the EXPENDITURE of the ANNUAL INTERNATIONAL  
EXHIBITIONS charged to Capital for Buildings, Fittings,  
&c. &c.

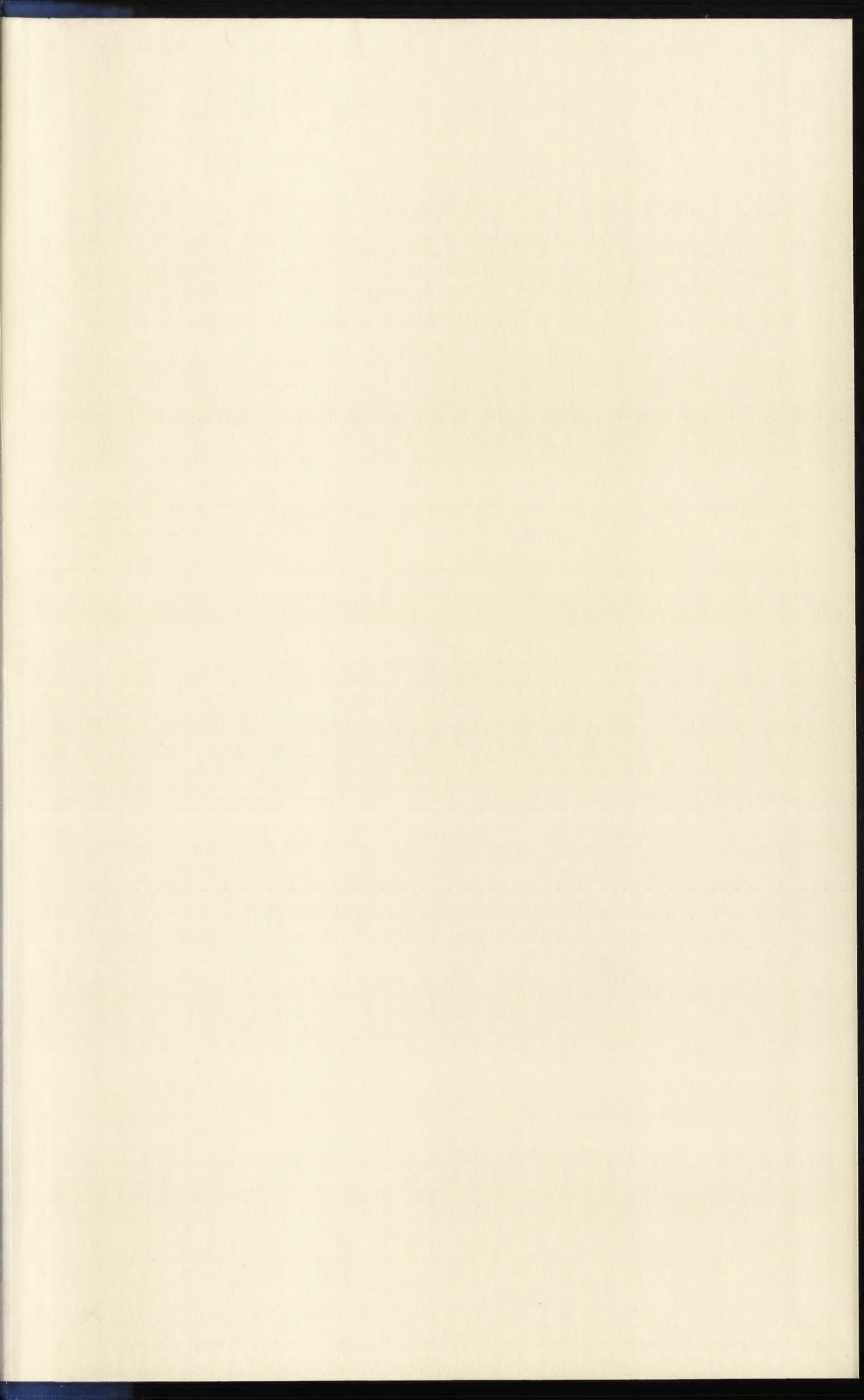
Detailed  
Receipts and  
Expenditure.

	£ s. d.	£ s. d.
Main buildings - - - - -	61,428 13 4	
Conservatories on northern arcades - - - - -	5,666 0 0	
Terra cotta, tiles, &c. - - - - -	5,407 16 3	
Additional works and buildings :		
Refreshment - - - - -	27,753 17 6	
Junction with Royal Albert Hall - - - - -	2,437 0 0	
Designs, drawing, and superintendence - - - - -	1,100 2 0	
Clerk of Works and surveyor's charges - - - - -	7,523 0 11	
Glass cases, stands, &c. - - - - -	7,179 19 10	
Fittings, hangings, drugget, blinds, seats, furniture, and turnstiles - - - - -	5,393 14 7	
Heating apparatus - - - - -	1,729 16 6	
Lighting - - - - -	216 4 5	
Fire (security against) - - - - -	547 0 0	
	<hr/> 126,383 5 4	<hr/>

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